Wired / Wireless
IR IP Camera

ICA-108 / ICA-108W

User's Manual

Version: 3.0

Date: Apr. 2009

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Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2 Increase the separation between the equipment and receiver.
3 Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio technician for help.

FCC Caution

To assure continued compliance. (example-use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the Following two conditions: (1) This device may not cause harmful interference, and (2) this Device must accept any interference received, including interference that may cause undesired operation.

Federal Communication Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this and of the computer manufacture must therefore be allowed at all times to ensure the safe use of the equipment.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

WEEE Regulation

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.

Revision

User's Manual for PLANET Wired / Wireless IR IP Camera
Model: ICA-108 / 108W (for F/W v 3.0 or above)
Rev: 3.0 (Apr. 2009)
Part No. EM-ICA108_W_v3

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1. Introduction

The ICA-108/108W is a wired/wireless IR IP Camera. The ICA-108/108W can send live video and audio via the internet to a web browser anywhere in the world.

The ICA-108/108W features zero-lux illumination. The 6 IR illuminators built around the lens bring the clearest vision at night. The ICA-108/108W offers color picture in day time and monochrome at complete darkness with built in CMOS sensor up to 10 meters. Use new High-Light LED to provide greater performance in the dark and longer life of LED.

Multi-profile stands for video stream simultaneously. The ICA-108/108W can generate MPEG-4 and M-JPEG streaming to different users in the meantime. Moreover, the resolution can differ from one user to another. This state-of-art design is considerable to fit in various network environments. Up to 10 users can access to the ICA-108/108W at any time simultaneously.

The ICA-108/108W takes surveillance to use 2-way audio. It can remotely talk to anyone at ICA-108/108W site when adding a speaker on ICA-108/108W. The ICA-108W uses IEEE 802.11b/g wireless technology that communicates at a maximum wireless signal rate of up to 54Mbps and security features include WEP and WPA encryption.

1.1 Overview

This user's manual explains how to operate the wired/wireless IR IP Camera from a computer. Basically, the user's manual is written to be read on the computer display. However, users might consider printing it out to access easily and read it before you operate the Network Camera. This manual shows how to set up the two cameras, unless model name specified terms "IR IP Camera" will be used for these two models.

1.2 Features

- AXIS compatible SDK
- High quality of CMOS image sensor
- Clear and high resolution quality pictures for day and night
- 3GPP for 3G mobile remote applications
- Multi-profile encoder supports MPEG-4 and M-JPEG video compression simultaneously and 30fps for all resolution
- 2-way audio with built-in microphone
- LED used on IR IP Camera are 4 times brighter than ordinary IR LED and visible distance up to 10 meter
- The ICA-108W supports IEEE 802.11b/g wireless LAN with WEP and WPA encryption
- Plug-N-Watch is able to simplify the system integration in existing network environment
- Because of supporting TCP / IP networking, SMTP e-mail and HTTP public network standards, IR IP Camera can be applied and utilized to a mixed IP network environment
- Easy configuration: Network administrators can configure and manage IR IP Camera via Windows-based utility or web interface

- DDNS, PPPoE and FTP uploading support provide more alternatives in surveillance network
- Motion Detection: the motion detection feature can monitor any suspicious movement in specific area

1.3 Package Contents

User can find the following items in the package:

1. IR IP Camera x 1
2. Power adapter x 1
3. Wall mount accessories x 1
4. Utility and manual CD x 1
5. Quick Start Guide x 1
6. External Antenna (ICA-108W only)

NOTE:
1. If any of the above items are missing, please contact your dealer immediately.
2. Using the power supply that is not the one included in IR IP Camera packet will cause damage and void the warranty for this product.

2. Basic Setup

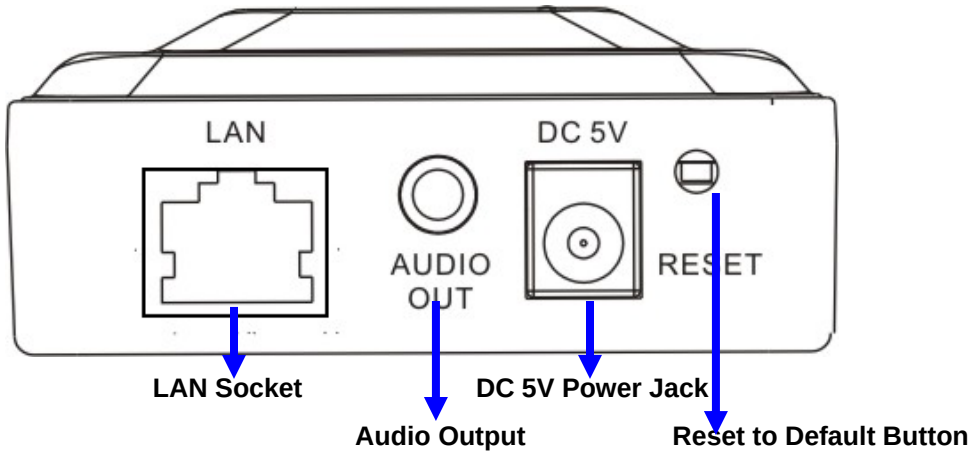
This chapter provides details of installing and configuring the wired/wireless IR IP Camera.

2.1 System Requirements

Network Interface	10/100MBase-TX Ethernet
Monitoring System	Recommended for Internet Explorer 6.0 or later
System Hardware	· CPU: Pentium 4, 1.5GHz or above · Memory Size : 512 MB (512 MB or above Recommended) · VGA card resolution : 1024 x 768 or above **· Network bandwidth: In VGA resolution mode, minimum upload bandwidth is 1Mbps.**

NOTE: The listed information is minimum system requirements only. Actual requirement will vary depending on the nature of your environment.

2.2 Physical Description



1. LAN Socket

The LAN port is a RJ-45 connector for connections to 10Base-T Ethernet or 100Base-TX Fast Ethernet cabling. This Ethernet port built N-Way protocol can detect or negotiate the transmission speed of the network automatically. Please use Category 5 “straight” cable to connect the IR IP Camera to a 100Mbps Fast Ethernet network switch or hub.

Note: In case you need to connect the device to PC or notebook directly, you should use a cross-over cable instead.

2. Audio Output

Audio output jack allows this device to output audio or alerting sound.

3. DC Power Jack

The DC power input jack is located on the IR IP Camera. The input power is 5V DC.

Note: Using the power supply that is not the one included in IR IP Camera packet will cause damage and void the warranty for this product.

4. Reset to Default Button

This button is hidden in the pinhole beside the DC Power Jack. Please refer to the Appendix A in this manual for more information.

2.3 Hardware Installation

1. Attach the IR IP Camera with the included stand.
2. Locate the IR IP Camera on the table or fix it onto ceiling or wall.
3. Plug an Ethernet cable into the IR IP Camera.
4. Assemble the antenna to ICA-108W.
5. Connect the external power supply to IR IP Camera.
6. Done.

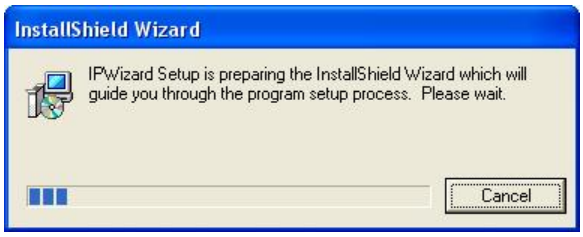
2.4 Initial Utility Installation

This chapter shows how to quick set up your IR IP Camera. The IR IP Camera is with the default settings. However to help you find the IR IP Camera quickly the windows utility-IP Wizard can search the IR IP Cameras in the network that shall help you to configure some basic setting before you started advanced management and monitoring.

1. Insert the bundled CD into the CD-ROM drive to launch the autorun program. Once completed, a welcome menu screen will appear. Please click the IP camera model name to next page.

2. Click the “IP Wizard” hyperlink; you will see the InstallShield Wizard dialog box as below.

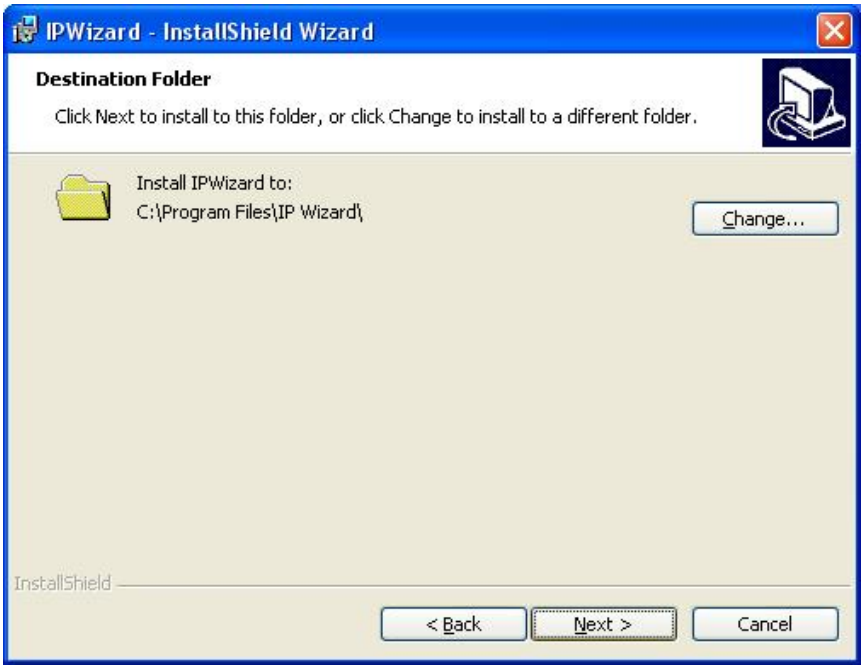
   NOTE: If the welcome screen does not appear, click “Start” at the taskbar. Then, select “Run” and type “D:\Utility\IPWizard\setup.exe”, assume D is your CD-ROM drive.


InstallShield Wizard
IPWizard Setup is preparing the InstallShield Wizard which will guide you through the program setup process. Please wait.
Cancel

3. The “Welcome to the InstallShield Wizard for IP Wizard” will display on the screen and click “Next” to continue.

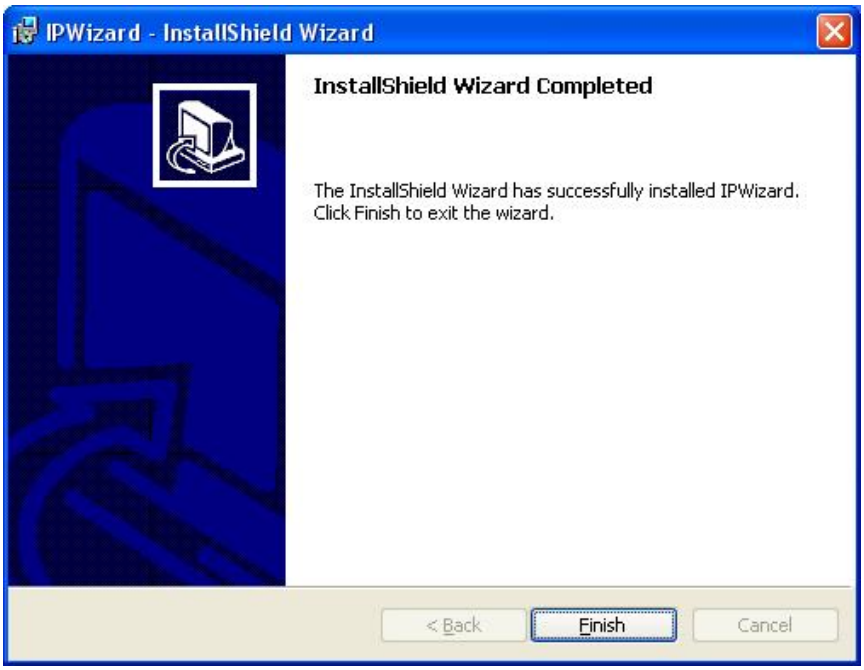
IPWizard - InstallShield Wizard
Welcome to the InstallShield Wizard for IPWizard
The InstallShield(R) Wizard will install IPWizard on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

4. Please click “Next” to install with original settings, or you may click “Change…” button to modify the install folder then press “Next” to continue.



5. Please click “Install” to start the installation.

6. Please click “Finish” to complete the installation



7. Please double-click the utility icon

on the desktop then you will see the IR IP Camera utility.

2.5 IP Wizard

When you installed the IR IP Camera on a LAN environment, you may execute IP Wizard to discover IR IP Camera's IP address and set up related parameters in the IR IP Camera.

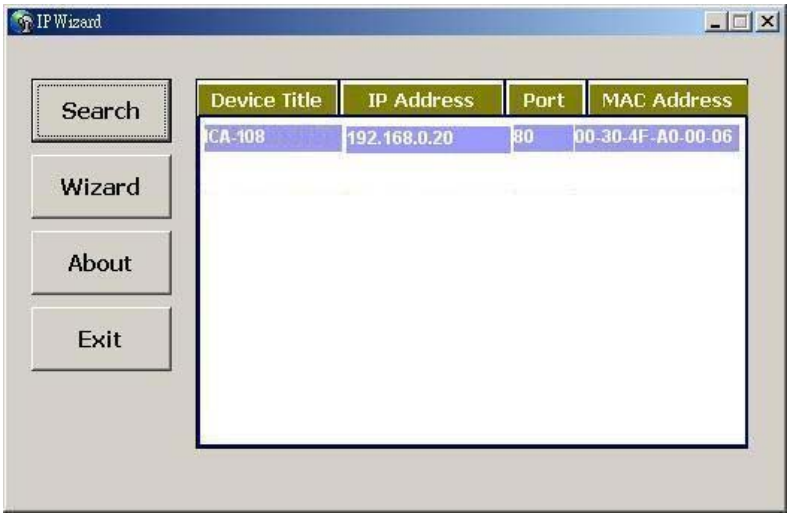
NOTE: The ICA-108 installation steps are similar. Below is the installation of ICA-108W.

Search Button:

When click **Search** button, a searching window will pop up. IP Wizard is starting to search Internet Camera on the LAN. The message "No Network Devices Is Found" will appear on this window if IP Wizard cannot find any IR IP Camera on the LAN. Otherwise, existed IR IP Cameras will be listed. If total quantity is over, please move the cursor to Information Box. Click on the left button of the mouse and the Information Box of the Listing Window will roll upward automatically; on the contrary, move the cursor to the Information Box on the top of Listing Window and click on the left button of the mouse and Listing Window will roll downward.

Wizard Button:

When IP Wizard finds your IR IP Camera, **Wizard** button will become available. Please select the device you would like to configure in the Information Box. The device will turn into yellow which means this device is selected; please press "**Wizard**" button. Or you could double click the mouse left key on the selected IR IP Camera. Relative settings will be carried out. Details of Install Wizard will be specified as Section 2.6.



About Button:

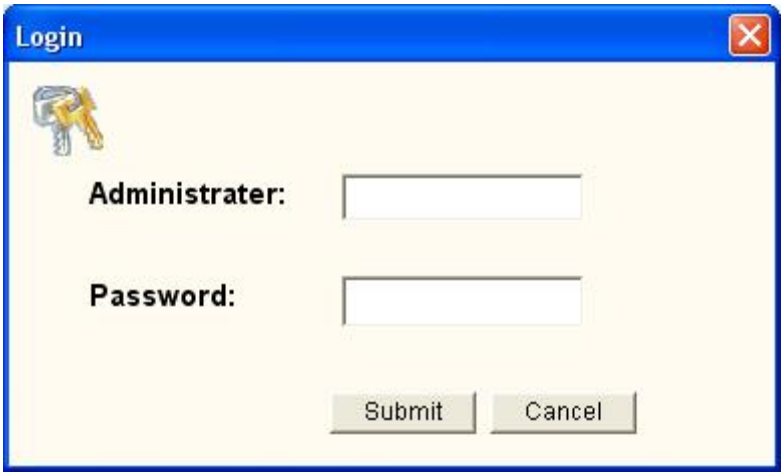
When click "About" button, you will see the version information of IP Wizard shown in the pop-up dialog box.

Exit Button:

Click "**Exit**" button will close the IP Wizard Program.

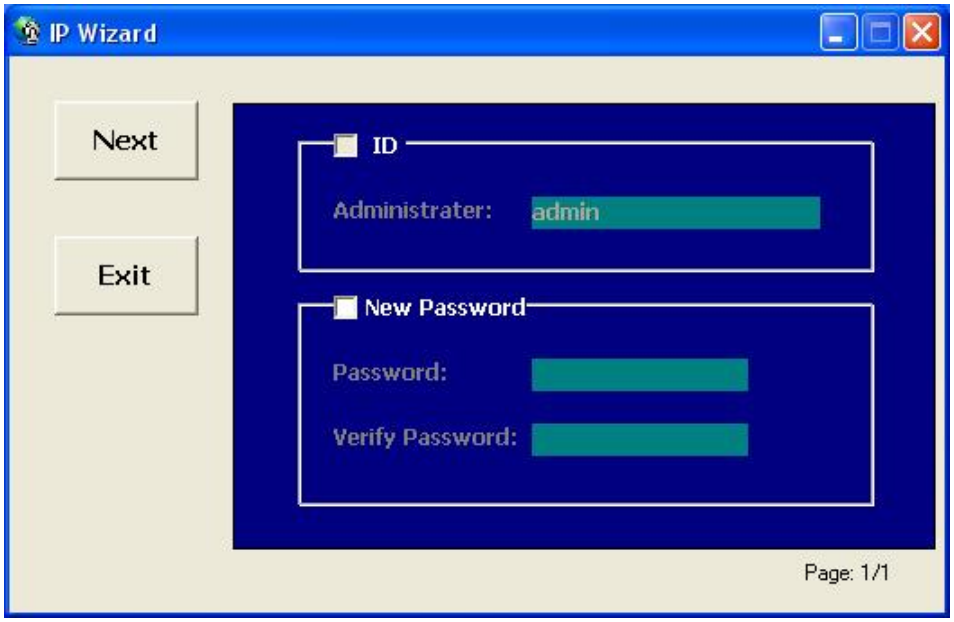
2.6 Configure With IP Wizard

After pressing Installation Wizard, please key in Username and Password of the device when login dialog box appears on the screen. You can login the setup page if authorized name and password is correct. Default **username/password** for machine login: **admin**/<no password>



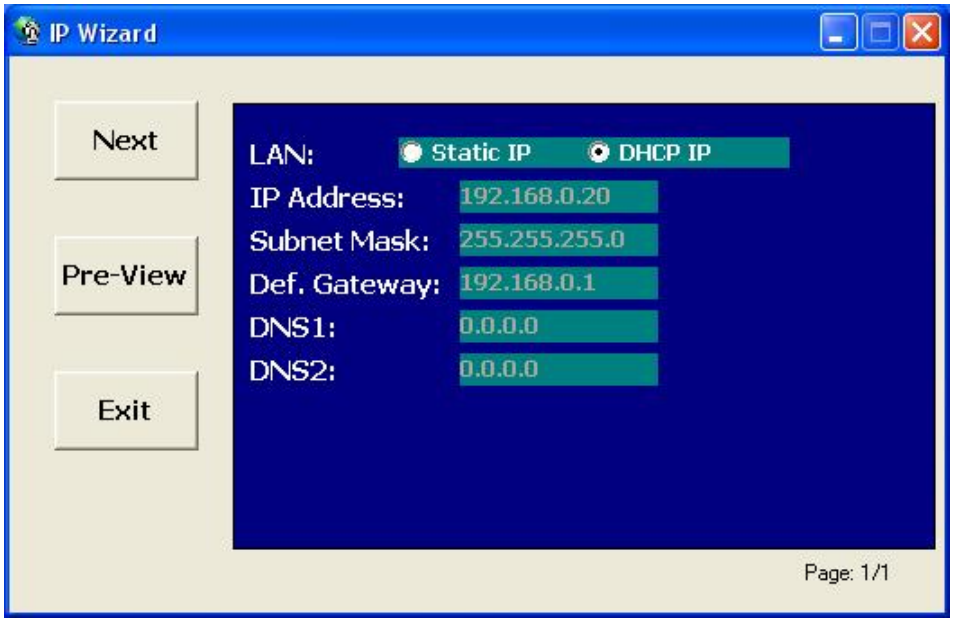
Wizard Page 1: Username and Password

This page is about the change of the authorized user name and password of the selected device. If you don't want to change them, please click "Next" to move to the next page. Press "Exit" button if you don't want to set up right now. If you want to change authorized name or password, you have to check the box in front of **ID** or **New Password**. Authorized Username should contain at least 5~20 characters and New Password should contain at least 4~8 characters.



Wizard Page 2: LAN Setting

This page is about the select of Static IP or DHCP ON.

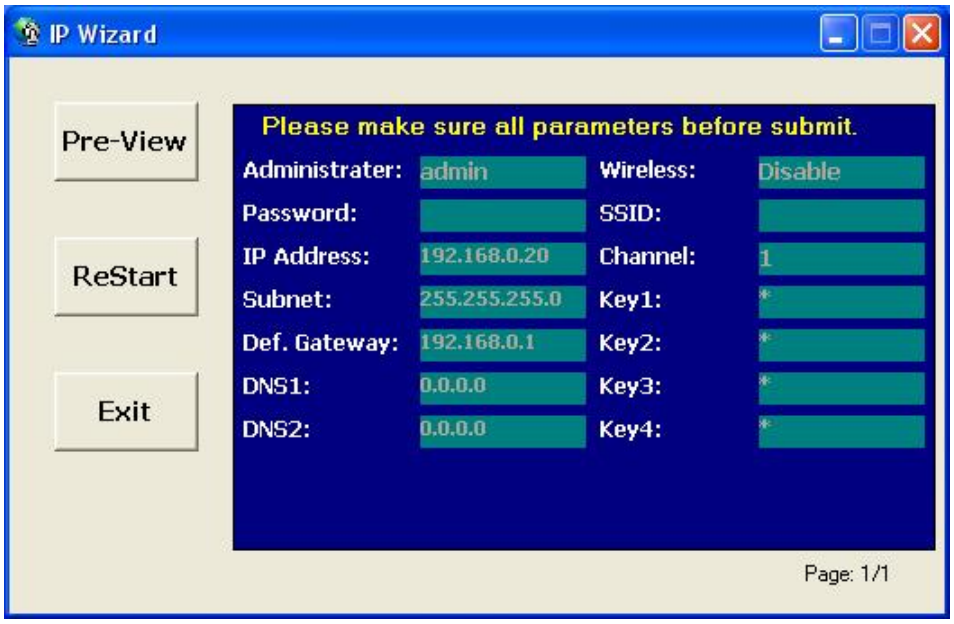


LAN:	You can configure this IR IP Camera to obtain its address automatically or manually assign. If there is a DHCP server in your network environment and you select "**DHCP ON**", IR IP Camera can automatically obtain an IP address. If you don't have DHCP server or you want to use fixed IP address, please select "**Static IP**" and fill in the following fields with proper parameters.
IP Address:	IP address is a unique number for identifies this device on the WAN or LAN. These numbers are usually shown in groups separated by periods, for example: 192.168.0.200
Subnet Mask:	Subnets allow network traffic between hosts to be separated based on the network's configuration. In IP networking, traffic takes the form of packets. IP subnets advance network security and performance to some level by organizing hosts into logical groups. Subnet masks contain four bytes and usually appear in the same "dotted decimal" data. For example, a very common subnet mask in its binary demonstration 11111111 11111111 11111111 00000000 will usually be shown in the corresponding, more readable form as 255.255.255.0.
Def. Gateway:	A gateway is a piece of software or hardware that passes information between networks. You'll see this term most often when you either log in to an Internet site or when you're transient email between different servers.
DNS1:	When you send email or position a browser to an Internet domain such as xxxxx.com, the domain name system translates the names into IP addresses. The term refers to two things: the conventions for naming hosts and the way the names are control across the Internet.
DNS2:	The same function as DNS1. It is optional, not necessary

Note: If no IP address is assigned after 30 seconds, the IR IP Camera will work with its default IP address **192.168.0.20**. User may now open your web browser, and key in http://192.168.0.20 in the address bar of your web browser to logon IR IP Camera's web configuration page.

Wizard Page 3: Confirmation

This page shows the new configurations. If it is correct, please press "Submit" icon and the setting information will be save to your IR IP Camera. Click on "Exit" to close this window.



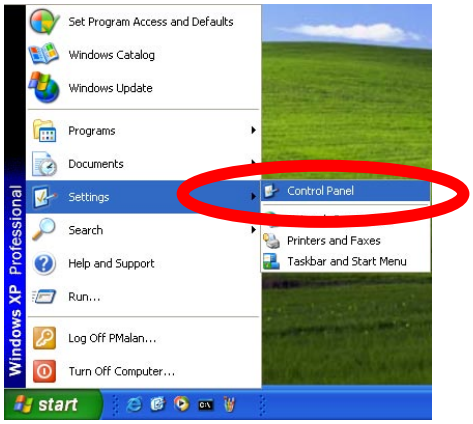
2.7 UPnP Function

NOTE: Windows 2000 does not support UPnP feature.

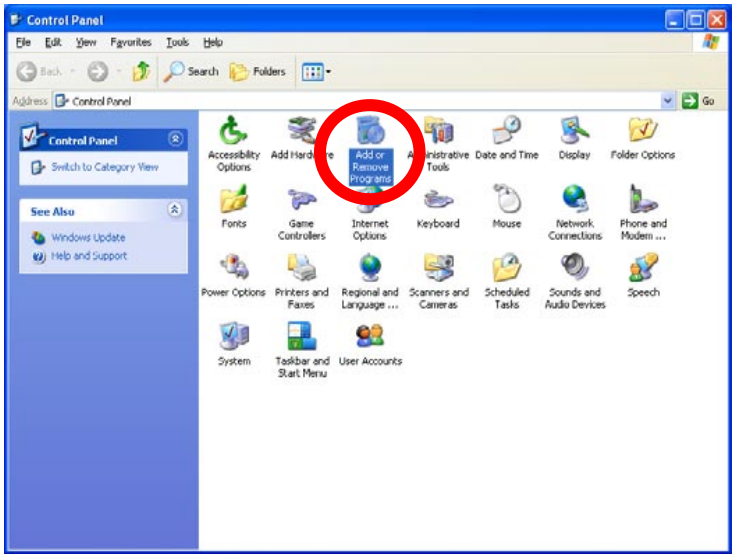
2.7.1 Windows XP

UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows XP, of your PC is UPnP enabled, the device will be very easy to configure. Use the following steps to enable UPnP settings only if your operating system of PC is running Windows XP.

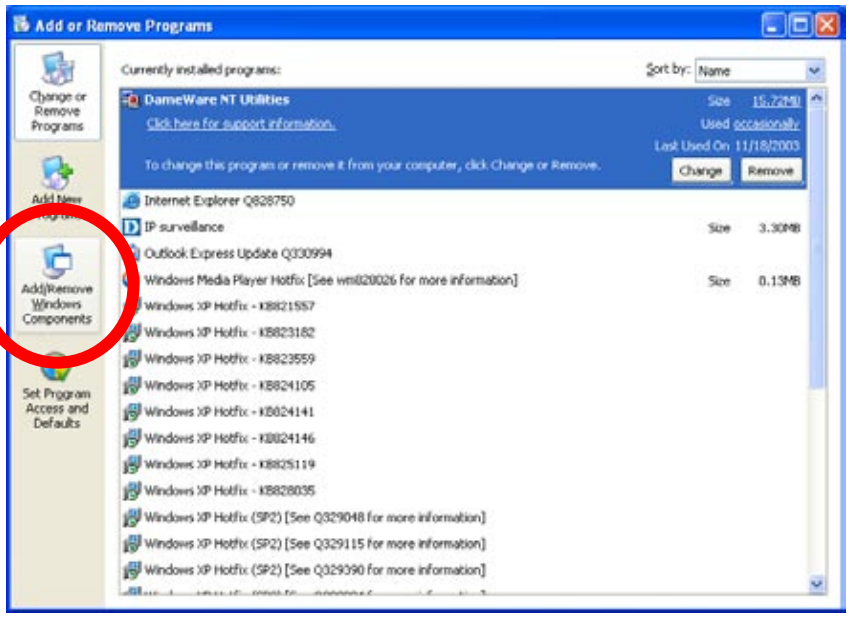
Go to **Start > Settings**, and Click **Control Panel**



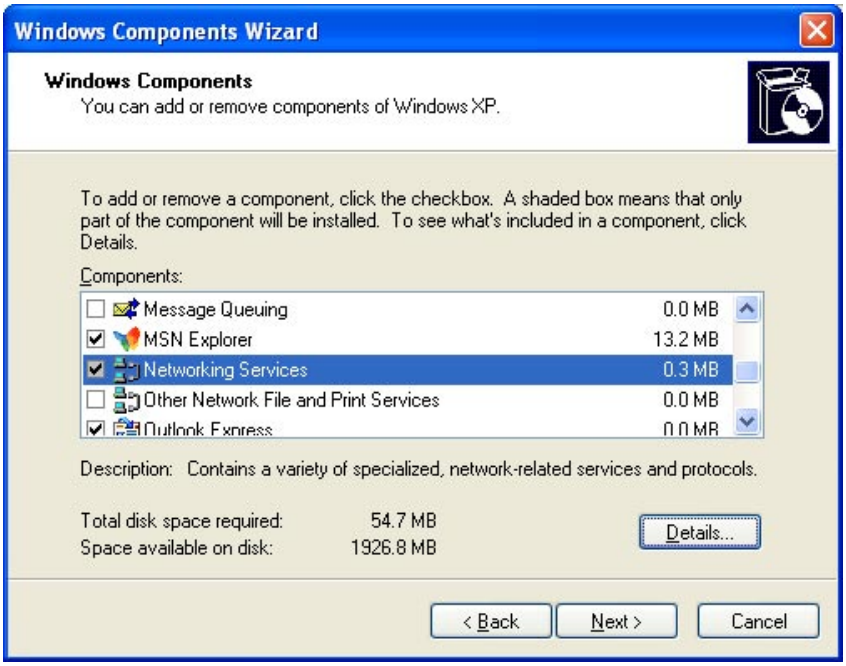
The “Control Panel” will display on the screen and double click **Add or Remove Programs** to continue



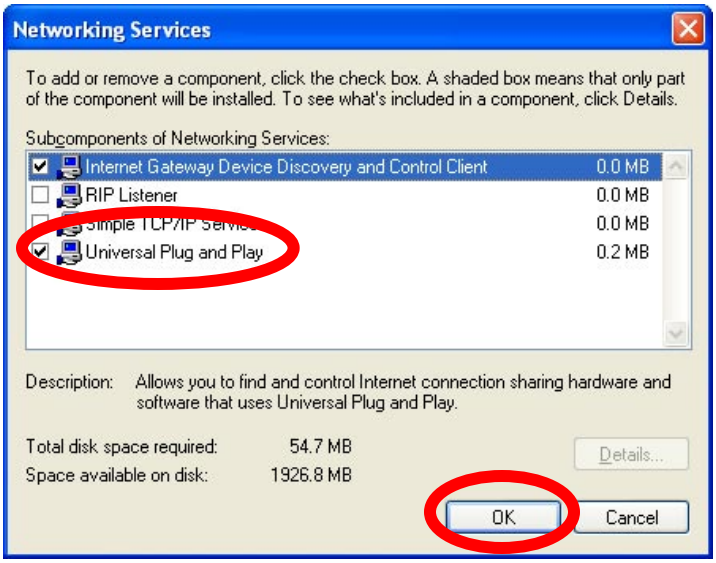
The “Add or Remove Programs” will display on the screen and click **Add/Remove Widows Components** to continue.


Add or Remove Programs
Change or Remove Programs
Add New Programs
Add/Remove Windows Components
Set Program Access and Defaults
Currently installed programs:
Sort by: Name
DameWare NT Utilities
Click here for support information.
Size 15.22MB
Used occasionally
Last Used On 11/18/2003
To change this program or remove it from your computer, click Change or Remove.
Change
Remove
Internet Explorer Q828750
IP surveillance
Size 3.30MB
Outlook Express Update Q330994
Windows Media Player Hotfix [See wm828026 for more information]
Size 0.13MB
Windows XP Hotfix - KB821557
Windows XP Hotfix - KB823182
Windows XP Hotfix - KB823559
Windows XP Hotfix - KB824105
Windows XP Hotfix - KB824141
Windows XP Hotfix - KB824146
Windows XP Hotfix - KB825119
Windows XP Hotfix - KB828035
Windows XP Hotfix (SP2) [See Q329048 for more information]
Windows XP Hotfix (SP2) [See Q329115 for more information]
Windows XP Hotfix (SP2) [See Q329390 for more information]

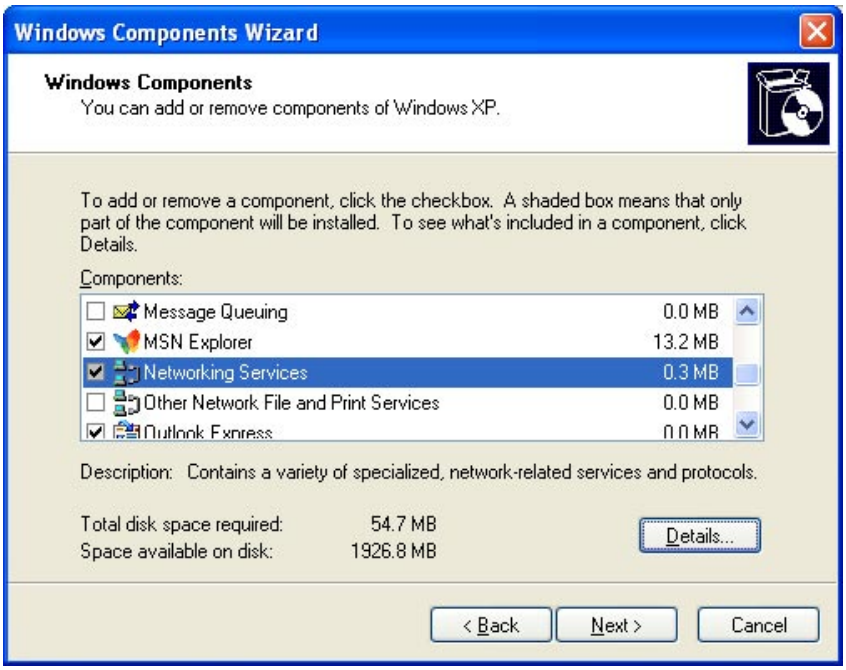
The following screen will appear, select **Networking Services** and click **Details** to continue


Windows Components Wizard
Windows Components
You can add or remove components of Windows XP.
To add or remove a component, click the checkbox. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.
Components:
Message Queuing 0.0 MB
MSN Explorer 13.2 MB
Networking Services 0.3 MB
Other Network File and Print Services 0.0 MB
Outlook Express 0.0 MB
Description: Contains a variety of specialized, network-related services and protocols.
Total disk space required: 54.7 MB
Space available on disk: 1926.8 MB
Details...
< Back
Next >
Cancel

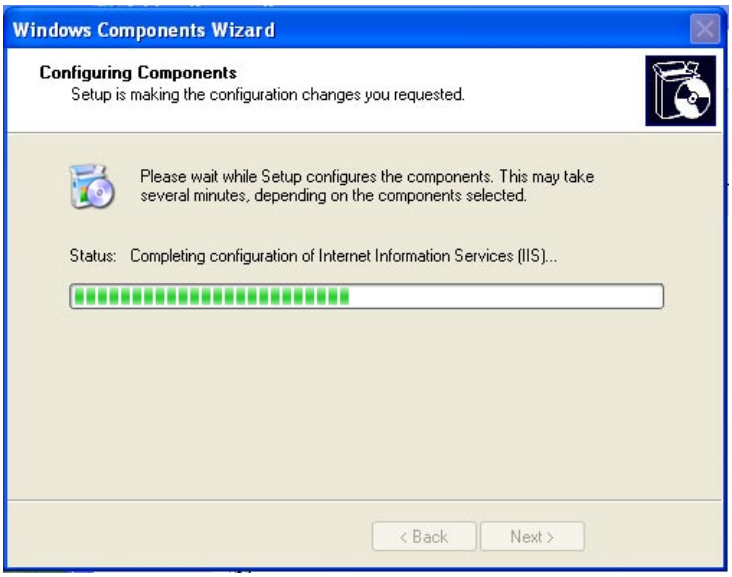
The “Networking Services” will display on the screen, select **Universal Plug and Play** and click **OK** to continue.


Networking Services
To add or remove a component, click the check box. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.
Subcomponents of Networking Services:
Internet Gateway Device Discovery and Control Client 0.0 MB
RIP Listener 0.0 MB
0.0 MB
Universal Plug and Play 0.2 MB
Description: Allows you to find and control Internet connection sharing hardware and software that uses Universal Plug and Play.
Total disk space required: 54.7 MB
Space available on disk: 1926.8 MB
Details...
OK
Cancel

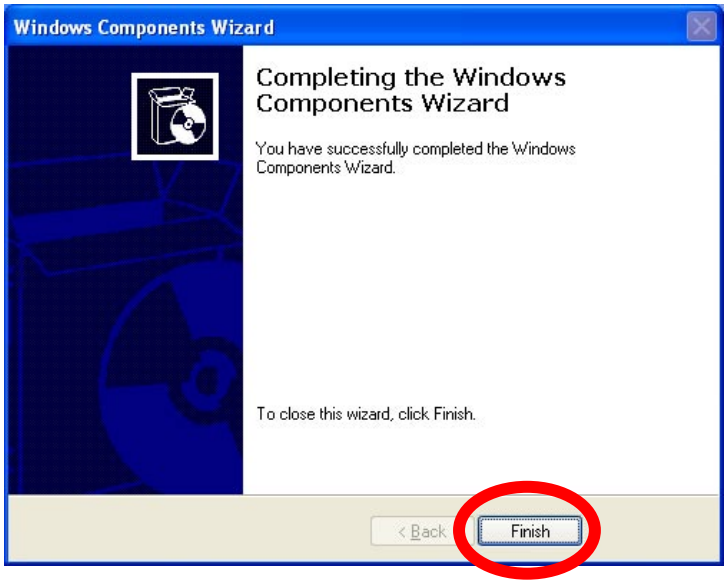
Please click **Next** to continue


Windows Components Wizard
Windows Components
You can add or remove components of Windows XP.
To add or remove a component, click the checkbox. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.
Components:
Message Queuing 0.0 MB
MSN Explorer 13.2 MB
Networking Services 0.3 MB
Other Network File and Print Services 0.0 MB
Outlook Express 0.0 MB
Description: Contains a variety of specialized, network-related services and protocols.
Total disk space required: 54.7 MB
Space available on disk: 1926.8 MB
Details...
< Back
Next >
Cancel

The program will start installing the UPnP automatically. You will see the below pop-up screen, please wait while Setup configures the components.

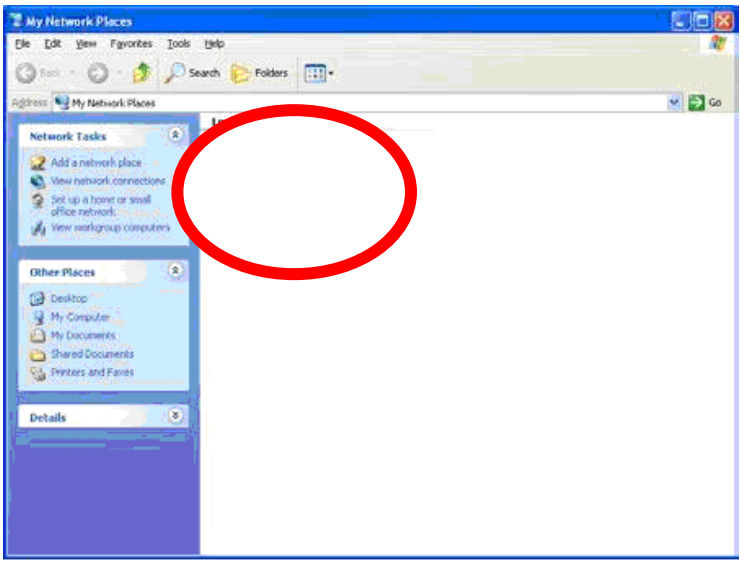

Windows Components Wizard
Configuring Components
Setup is making the configuration changes you requested.
Please wait while Setup configures the components. This may take several minutes, depending on the components selected.
Status: Completing configuration of Internet Information Services (IIS)...
< Back
Next >

Please click **Finish** to complete the UPnP installation


Windows Components Wizard
Completing the Windows Components Wizard
You have successfully completed the Windows Components Wizard.
To close this wizard, click Finish.
< Back
Finish

Double-click **My Network Places** on the desktop, the “My Network Places” will display on the

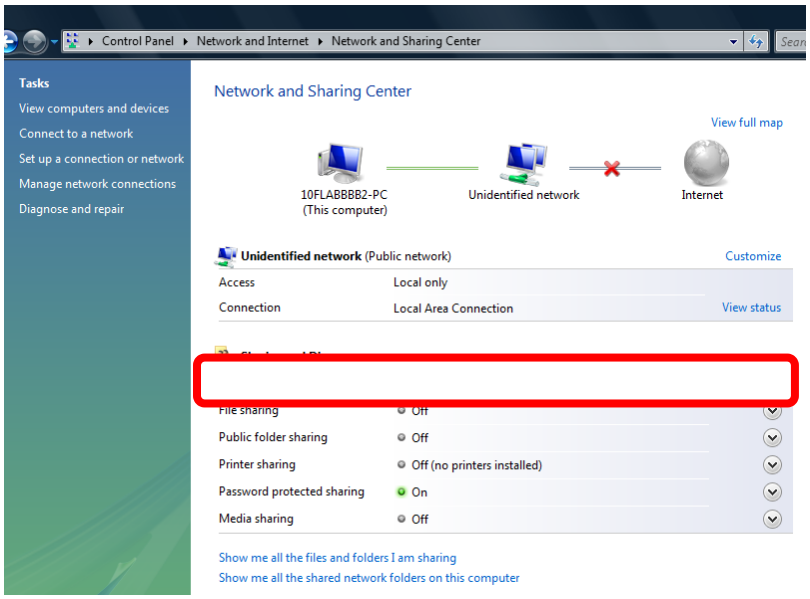
screen and double-click the UPnP icon with IR IP Camera to view your device in an internet browser.



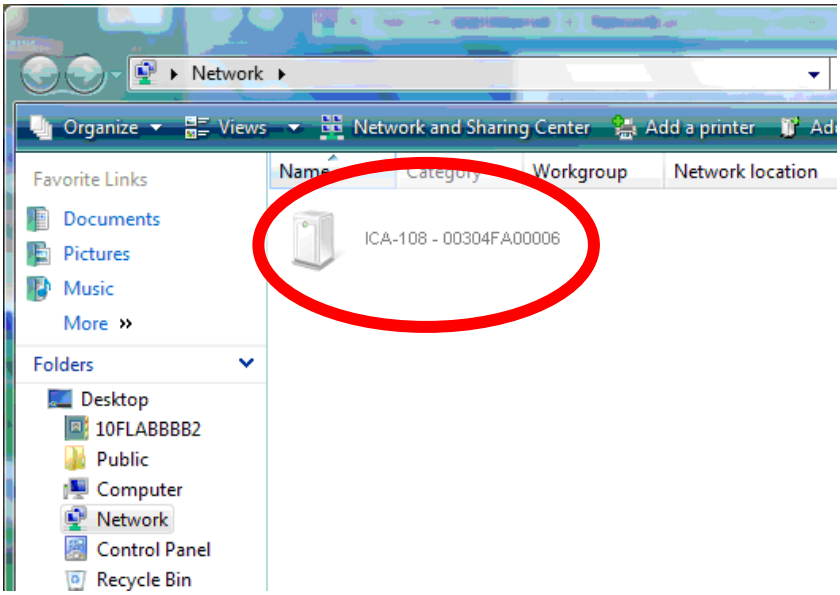
2.7.2 Windows Vista

UPnP™ is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled device. If the operating system, Windows Vista, of your PC is UPnP enabled, the device will be very easy to configure. Use the following steps to enable UPnP settings only if your operating system of PC is running Windows Vista.

Go to **Start > Control Panel > Network and Internet > Network and Sharing Center,** and turn on **Network Discovery**.



Double-click **My Network Places** on the desktop, the “My Network Places” will display on the screen and double-click the UPnP icon with IR IP Camera to view your device in an internet browser.



2.8 Setup ActiveX to use the IR IP Camera

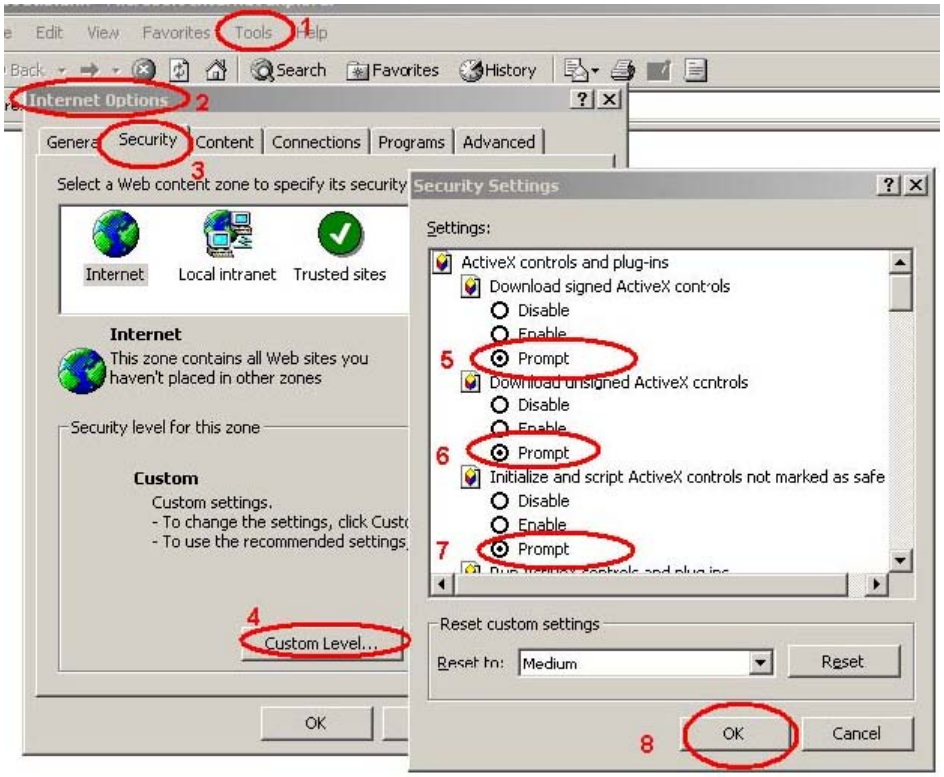
The IR IP Camera web pages communicate with the IR IP Camera using an ActiveX control. The ActiveX control must be downloaded from the IR IP Camera and installed on your PC. Your Internet Explorer security settings must allow for the web page to work correctly. To use the IR IP Camera, user must setup his IE browser as follows:

2.8.1 Internet Explorer 6 for Windows XP

From your IE browse ➔ "Tools" ➔ "Internet Options…" ➔ "Security" ➔"Custom Level…", please setup your "Settings" as follow.

Set the first 3 items

- *Download the signed ActiveX controls*
- *Download the unsigned ActiveX controls*
- *Initialize and script the ActiveX controls not masked as safe to Prompt*



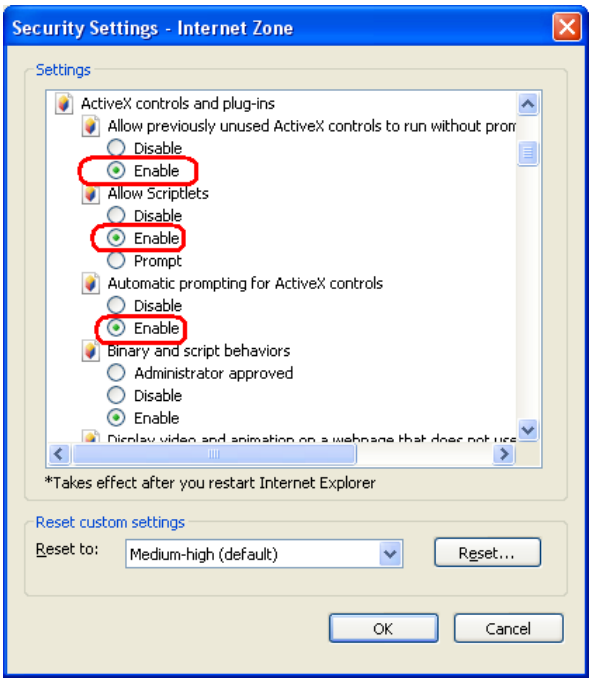
By now, you have finished your entire PC configuration for IR IP Camera.

2.8.2 Internet Explorer 7 for Windows XP

From your IE browse ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔”Custom Level…”, please setup your “Settings” as follow.

Set the first 3 items

- *Allow previously unused ActiveX control to run…*
- *Allows Script lets*
- *Automatic prompting for ActiveX controls*

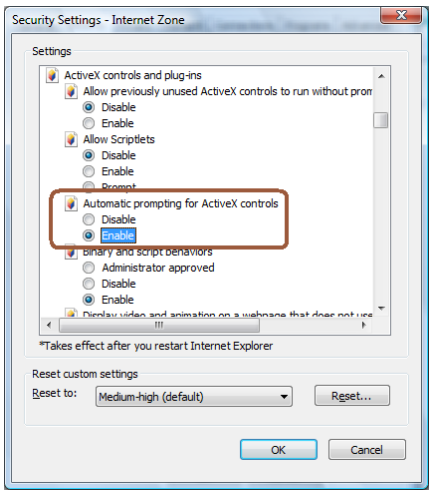


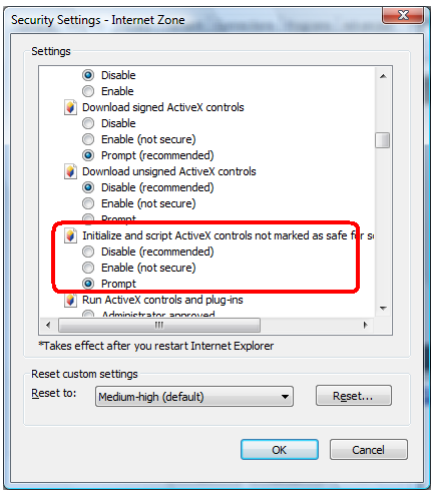
By now, you have finished your entire PC configuration for IR IP Camera.

2.8.3 Internet Explorer 7 for Windows Vista

From your IE browse ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔ ”Internet” ➔”Custom Level…”, please setup your “Settings” as follow.

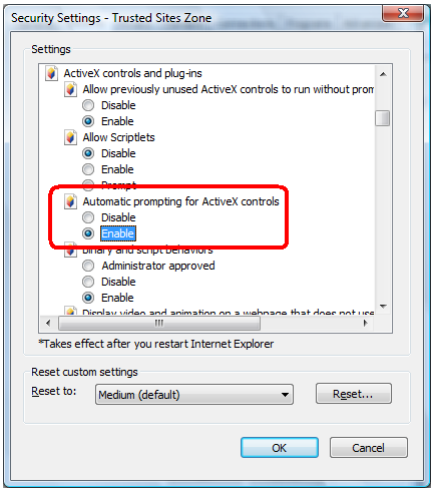
- *Enable “Automatic prompting for ActiveX controls”*
- *Prompt “Initialize and script active controls not marked….”*

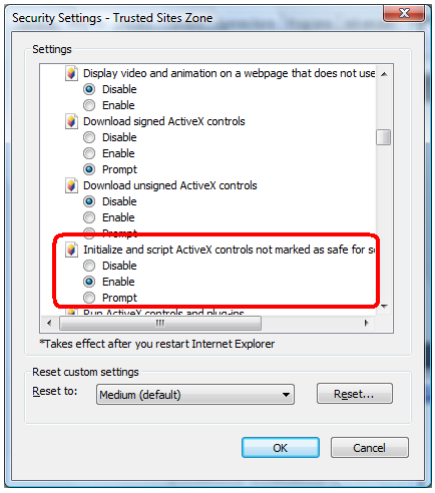




From your IE browse ➔ ”Tools” ➔ ”Internet Options…” ➔ ”Security” ➔ ”Trusted Sites” ➔”Custom Level…”, please setup your “Settings” as follow.

- *Enable “Automatic prompting for ActiveX controls”*
- *Prompt “Initialize and script active controls not marked….”*





By now, you have finished your entire PC configuration for IR IP Camera.

3. Web-based Management

This chapter provides setup details of the IR IP Camera's Web-based Interface.

3.1 Introduction

The IR IP Camera can be configured with your Web Browser. Before configure, please make sure your PC is under the same IP segment with IR IP Camera.

3.2 Connecting to IR IP Camera

- Use the following procedure to establish a connection from your PC to the IR IP Camera.
- Once connected, you can add the IR IP Camera to your Browser's Favorites or Bookmarks.

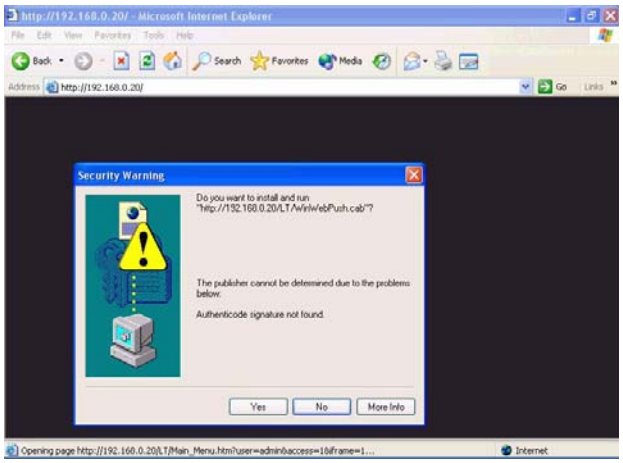
Start the web browser on the computer and type the IP address of the IR IP Camera. The Default IP: " http://192.168.0.20 "

The login window of IR IP Camera will appear, Default login **username/password** is:

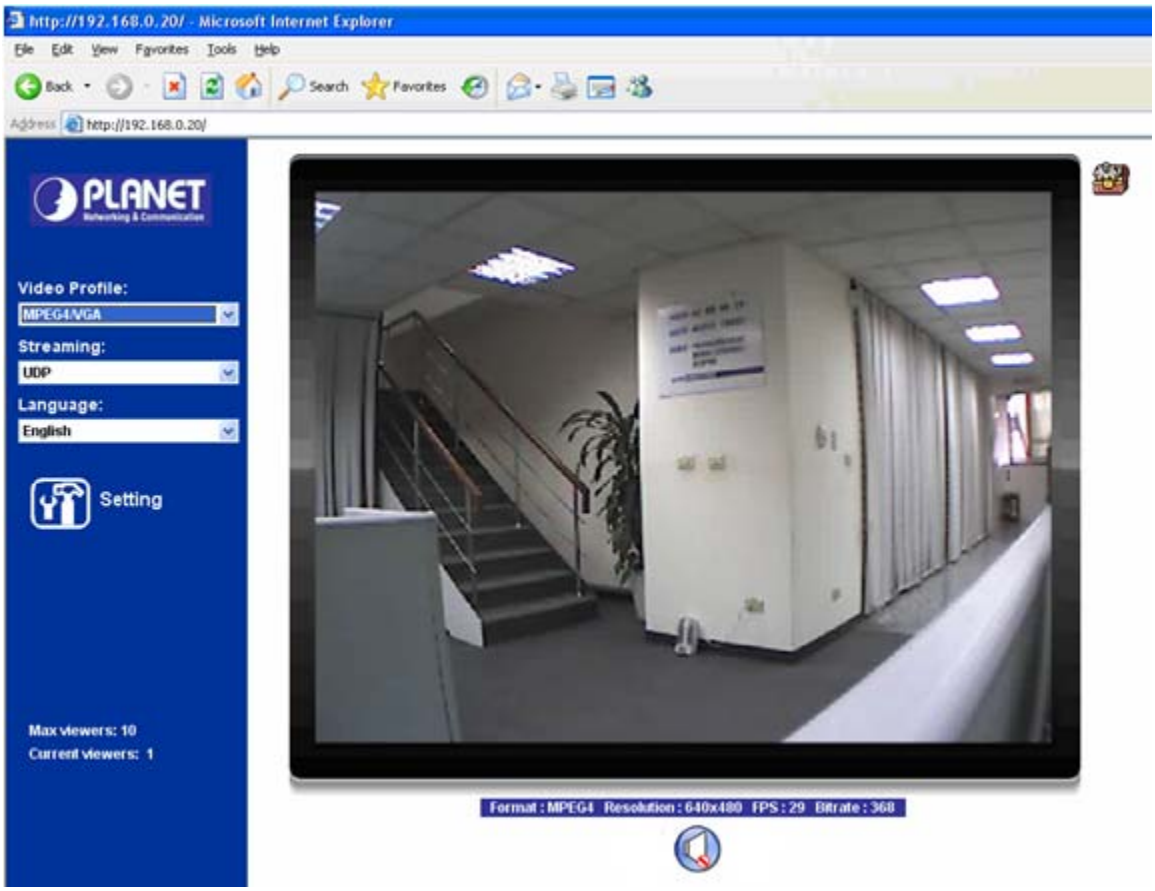
admin/ <no password>

NOTE: If the User name and Password have been changed with IP Wizard, please enter the new User name and Password here.

Web browser may display the “Security Warming” window, select “Yes” to install and run the ActiveX control into your PC.


Security Warning
Do you want to install and run "http://192.168.0.20/LT/WinWebPush.cab"?
The publisher cannot be determined due to the problems below:
Authenticode signature not found.
Yes
No
More Info

After the ActiveX control was installed and run, the first image will be displayed.



NOTE: If you log in the IR IP Camera as an ordinary user, setting function will be not available. If you log in the IR IP Camera as the administrator, you can perform all the settings provided within the device.

3.3 Live View

Start-up screen will be as follow no matter an ordinary users or an administrator.

Monitor Image Section:	The image shot by the IR IP Camera is shown here. The date and time are displayed at the top of the window.
Video Profile:	The IR IP Camera support multi-profile for both MEPG-4 and M-JPEG simultaneously. User can chose the proper and/or preferred profile here.
ActiveX Control:	The plug-in ActiveX control supports a lot of functions by clicking the left mouse button. Note that this feature only supports on the ActiveX control within Microsoft® Internet Explorer.
2-Way Audio:	The IR IP Camera supports 2-way audio function. User can chose to enable or disable this function by toggling the icon below : Disable audio uploading function. : Enable audio uploading function.
Setting Menu:	This function is detail setting for IR IP Camera that only available for user logged into IR IP Camera as administrator.

	Item	Action
	Network	Configure Network settings such as DHCP, DDNS, 3GPP, PPPoE and UPnP
	Camera	Adjust IR IP Camera parameters
	System	Configure system information, date & time, maintenance, and view system log file.
	Video	Configure bit rate and frame rate of video profiles
	Audio	Configure audio parameters
	User	Setup user name, password and login privilege
	E-Mail	Setup E-Mail configuration
	FTP	This device is a client site and configure information to upload images to server
	Object Detection	Setup Object detection
	Event Schedule	Configure the schedule while event triggered

Streaming Protocol:	User can select proper streaming protocol according to networking environment.
Language:	The device could provide multiple languages to meet customer's requirement.
Video Information:	Display video information including video format, resolution, frame rate and bit rate.

3.4 ActiveX Control

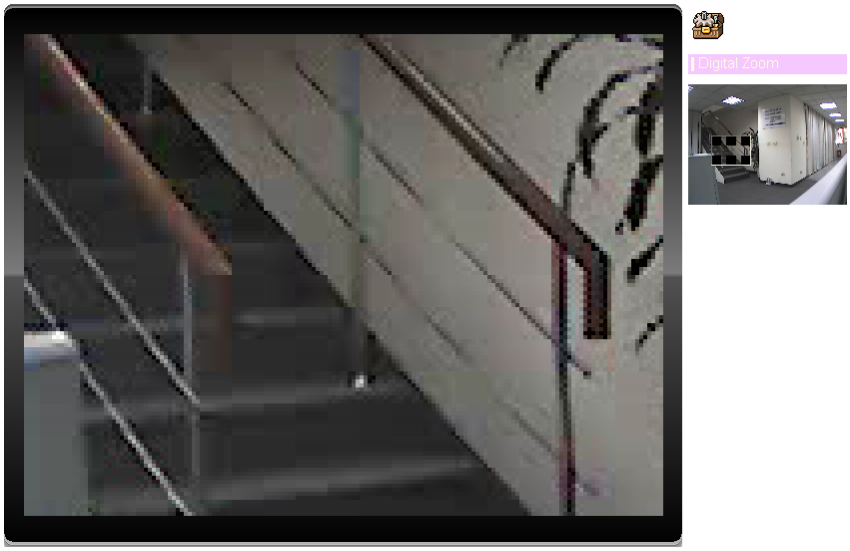
The plug-in ActiveX control supports a lot of functions by clicking the left mouse button. Note that this feature only supports on the ActiveX control within Microsoft® Internet Explorer.

On the ActiveX control icon, click the LeftMouseButton, then a menu pop-up. This menu provides features that are unique to the ActiveX control. These features include:

- *"Digital Zoom",*
- *"Record",*
- *"Snapshot",*
- *"Voice",*
- *"Statistics",*
- *"About"*

3.4.1 Digital Zoom

Click **Digital Zoom** to active this function as above. User can drag or scale the box over the video to adjust zoom ratio and position.



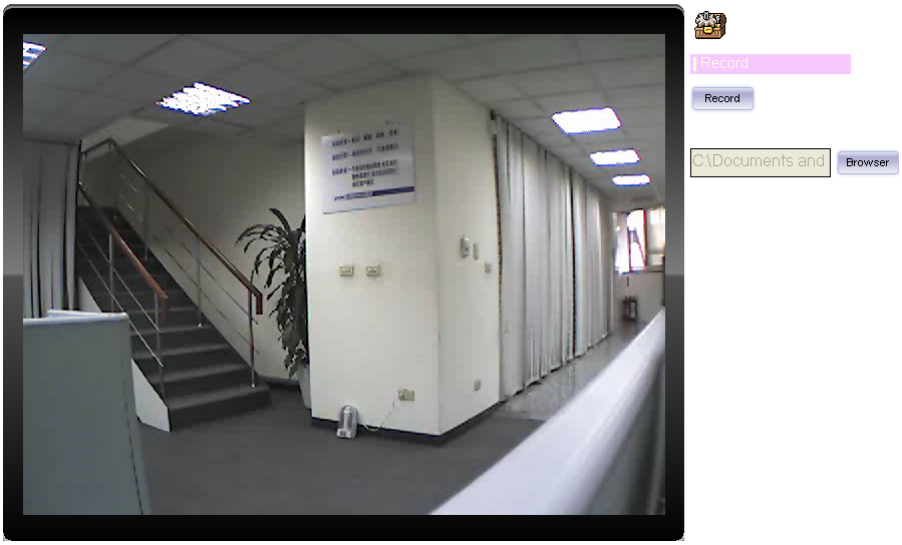
3.4.2 Record

Click **Record** to activate this function. Press **Record** button to start recording. The video file is saved as ASF format into your local PC. While you want to stop it, press **Stop** to stop recording. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

After stop recording, list the files, this file is named as Video_yyyymmddhhmmss.asf

The ASF files can be display by the standard Windows Media Player, but it needs the DixectX 9.0 or later version to be installed.

NOTE: Default save path is “C:\Documents and Settings\All user\Desktop

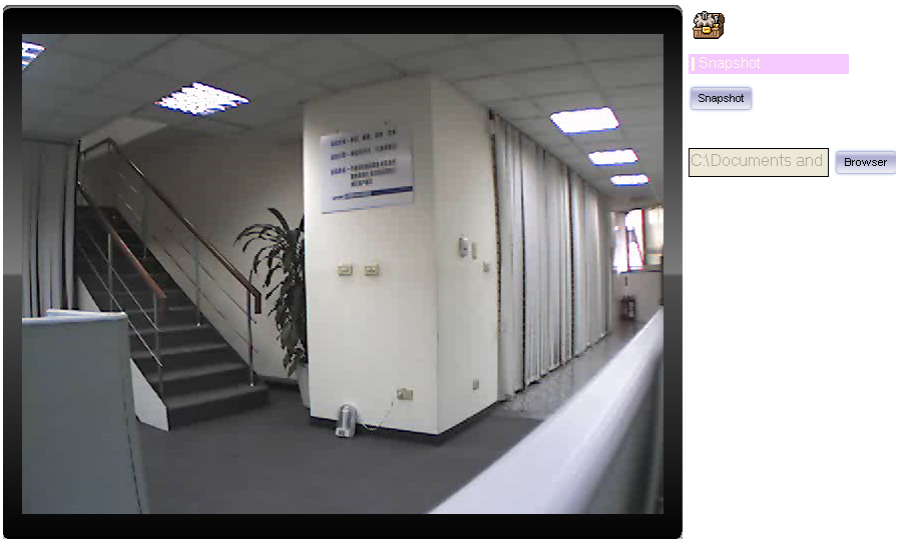


3.4.3 Snapshot

Click **Snapshot** to activate this function. Press **Snapshot** button to take a picture. The image file is saved as JPEG format into your local PC. Select **Browser**, the pop-up window to select the save path and file name prefix, select **OK** to continue.

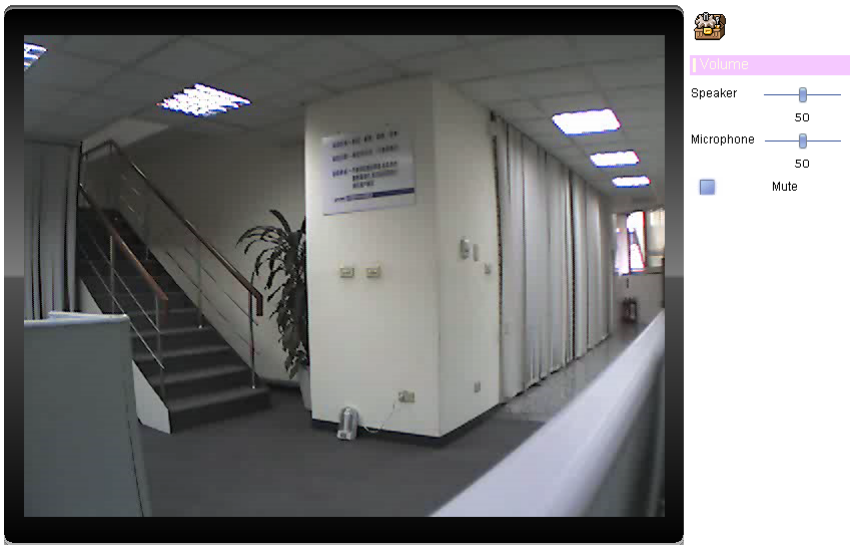
If you like to retrieve the saved image, select the file to display the saved image by using any one of graph editing tools.

NOTE: Default save path is “C:\Documents and Settings\All user\Desktop



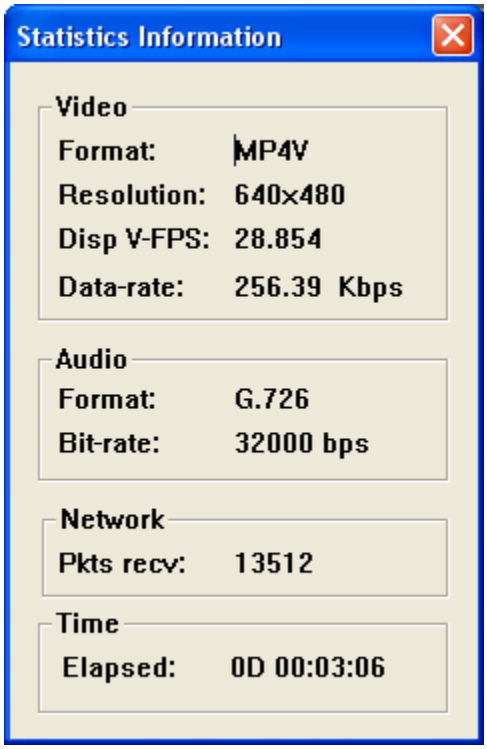
3.4.4 Voice

Click Volume to activate this function. These have two control bars for speaker and microphone volume. Scroll this control bar to adjust the audio attribute. Check the volume mute will mute the speaker output.



3.4.5 Statistics

Click **Statistics** to activate this function. A window will be popup to show the statistics information of the streaming status. **Note** that this information is the statistics between the device and your local PC.



3.4.6 About

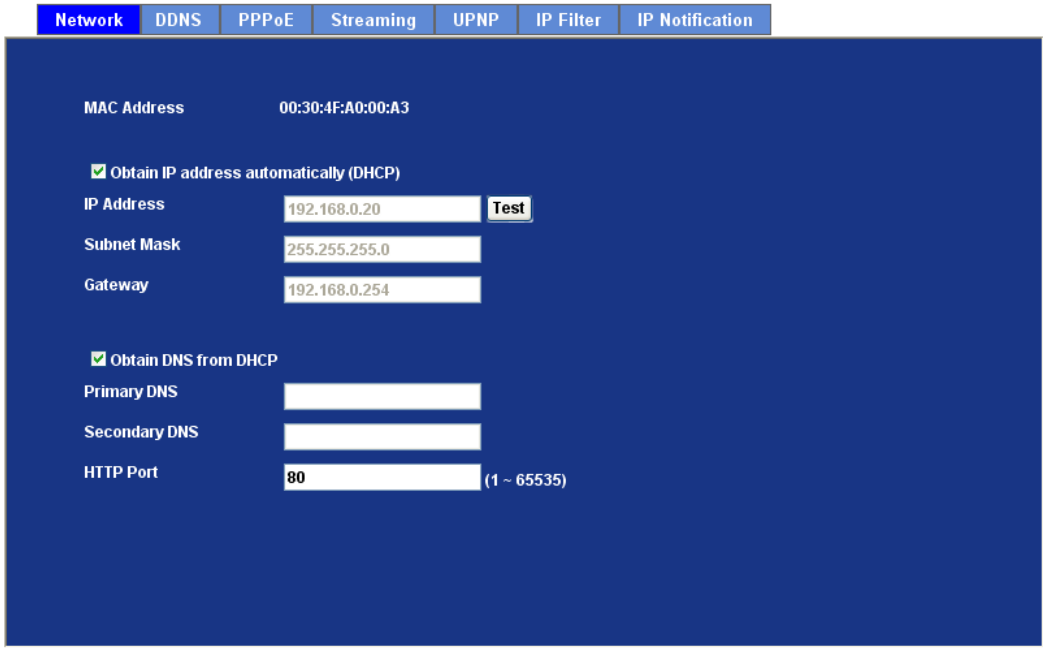
Click **About** to show the ActiveX information

3.5 Network

Use this menu to configure the network to connect the device and the clients.

3.5.1 Network

This section provides the menu of connecting the device through Ethernet cable.

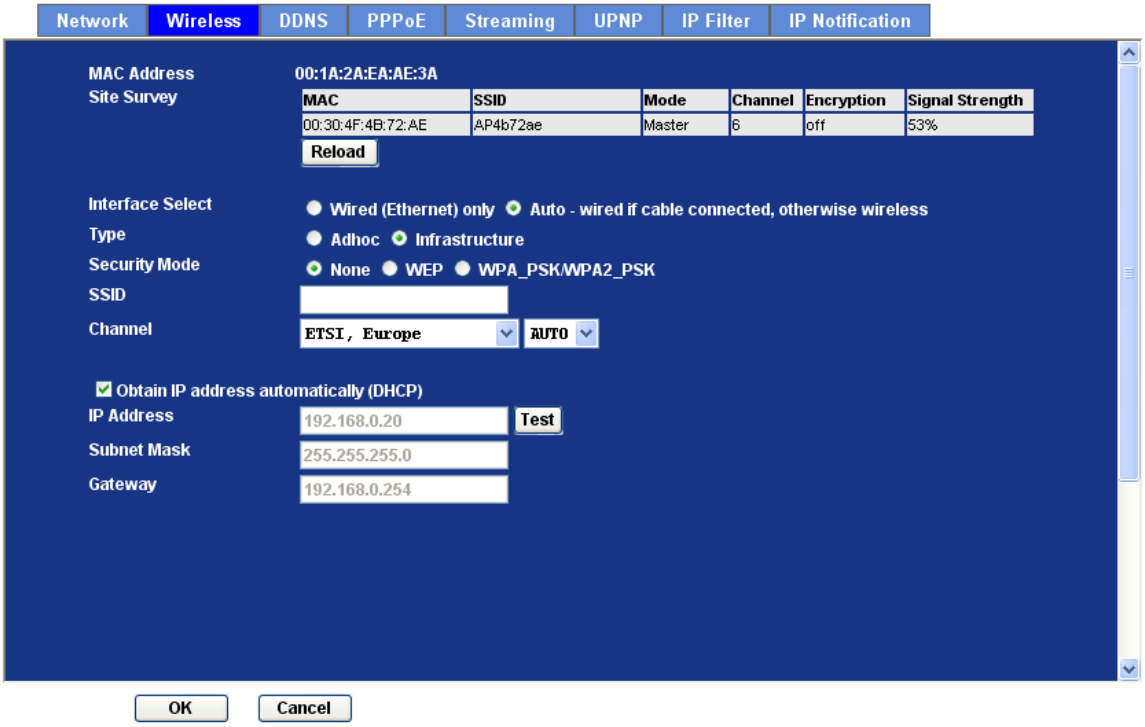


MAC address:	Display the Ethernet MAC address of the device. Note that user cannot change it.
Obtain an IP address automatically (DHCP):	DHCP: Stands for Dynamic Host Configuration Protocol. Enable this checked box when a DHCP server is installed on the network to issue IP address assignment. With this setting, the IP address is assigned automatically. If this device cannot get an IP address within limited tries, the device will assign a default IP address, 192.168.0.20, by itself as the default IP address.
IP address, Subnet mask, Gateway, 1st DNS, 2nd DNS server:	If you do not select Obtain an IP address automatically, then you need to enter these network parameters by yourself.
IP Address:	This address is a unique numbers that identifies a computer or device on the WAN or LAN. These numbers are usually shown in groups separated by periods, for example: 192.168.0.200

Subnet Mask:	Subnets allow network traffic between hosts to be separated based on the network's configuration. In IP networking, traffic takes the form of packets. IP subnets advance network security and performance to some level by organizing hosts into logical groups. Subnet masks contain four bytes and usually appear in the same "dotted decimal" data. For example, a very common subnet mask in its binary demonstration 11111111 11111111 11111111 00000000 will usually be shown in the corresponding, more readable form as 255.255.255.0.
Gateway:	A gateway is a piece of software or hardware that passes information between networks. You'll see this term most often when you either log in to an Internet site or when you're transient email between different servers.
Primary DNS:	When you send email or position a browser to an Internet domain such as xxxxx.com, the domain name system translates the names into IP addresses. The term refers to two things: the conventions for naming hosts and the way the names are control across the Internet.
Secondary DNS:	The same function as DNS1. It is option not necessary
Note: need to reboot the device to take this setting effect.	
HTTP Port:	The device supports two HTTP ports. The first one is default port 80 and this port is fixed. This port is very useful for Intranet usage. The second HTTP port is changeable. Users could assign the second port number of http protocol, and the WAN users should follow the port number to login. If the http port is not assigned as 80, users have to add the port number in back of IP address. For example: http://192.168.0.20:80. If multiple devices are installed on the LAN and also required to be accessed from the WAN, then the **HTTP Port** can be assigned as the virtual server port mapping to support multiple devices.
When the configuration is finish, please click “OK” to save and enable the setting.	

3.5.2 Wireless (ICA-108W only)

You could assign the related parameters into wireless setting. Note that this function is only available for the ICA-108W with WLAN capability.



MAC address:	Displays the Ethernet MAC address of the WLAN card. Note that user cannot change it.
Site survey:	Click the “Reload” button. It will refresh information window which list is the result of a network scan. Access points with a disabled SSID Broadcast will not appear unless the camera is associated with it.
Interface Select:	“Wired (Ethernet) only” or “Auto – wired if cable connected otherwise wireless”: Choose wired or wireless mode. However, note that wired is priority.
Type:	To select one of WLAN modes from Infrastructure or Ad-Hoc mode.
Security mode:	Shows which type of security the network uses. The device supports three security methods: None, WEP, WPA_PSK/WPA2_PSK
	WEP settings:
	Authentication: Select Open or Shared Key System Authentication, depending on the method used by your access point. Not all access points have this option, in which case they probably use Open System, which is sometimes known as SSID Authentication.
	WEP Mode: The key types available depend on the access point being used. The following options are available:

		•ASCII - In this method the string must be exactly 5 characters for 64-bit WEP and 13 characters for 128-bit WEP. •HEX - In this method the string must be exactly 10 hexadecimal (0-9, A-F) characters for 64-bit WEP and 26 hexadecimal characters for 128-bit WEP.
	Web Key 1~4:	Key value of WEP.
	WPA settings:	WPA Key: Key value of WPA. The device uses a pre-shared key (PSK) for key management. The pre-shared key can be entered either as Manual hex, as 64 hexadecimal characters, or as a Passphrase, using 8 to 63 ASCII characters.
SSID:	This is the name of the wireless network the device is configured for. The field accepts up to 32 alphanumeric characters. The name must be exactly the same as that used in the wireless access point, or the connection will not be established. Leaving this field blank means the device will attempt to access the nearest open network.	
Channel:	Chooses the wireless channel in use currently.	
Obtain IP address automatically (DHCP):	Enable this checked box when a DHCP server is installed on the network to issue IP address assignment. With this setting, the IP address is assigned automatically.	
IP address, Subnet mask, and Gateway:	If you do not select Obtain an IP address automatically, then you need to enter these network parameters manually.	
IP Address:	This address is a unique numbers that identifies a computer or device on the WAN or LAN. These numbers are usually shown in groups separated by periods, for example: 192.168.0.200	
Subnet Mask:	Subnets allow network traffic between hosts to be separated based on the network's configuration. In IP networking, traffic takes the form of packets. IP subnets advance network security and performance to some level by organizing hosts into logical groups. Subnet masks contain four bytes and usually appear in the same "dotted decimal" data. For example, a very common subnet mask in its binary demonstration 11111111 11111111 11111111 00000000 will usually be shown in the corresponding, more readable form as 255.255.255.0.	
Gateway:	A gateway is a piece of software or hardware that passes information between networks. You'll see this term most often when you either log in to an Internet site or when you're transient email between different servers.	

Note: To enable WLAN function, user must set these related parameters correctly at first. Then power off the ICA-108W and remove Ethernet cable from ICA-108W. Power on the ICA-108W again and WLAN mode will be available accordingly.

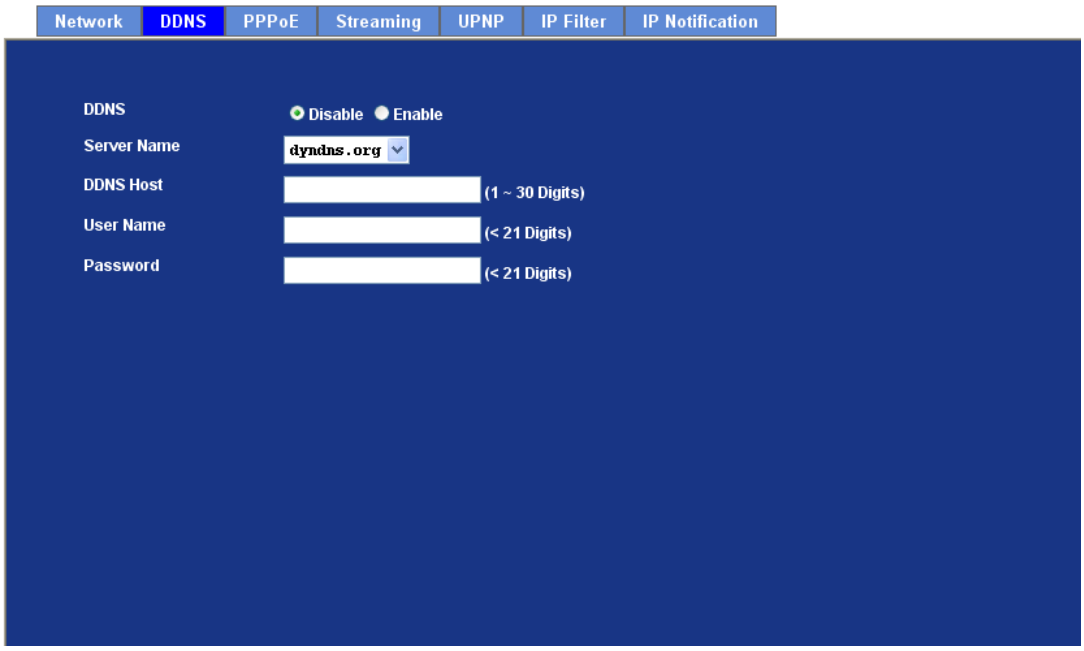
3.5.3 DDNS server

DDNS: Stands for Dynamic Domain Name Server

The device supports DDNS. If your device is connected to xDSL directly, you might need this feature. However, if your device is behind a NAT router, you will not need to enable this feature. Because DDNS allows the device to use an easier way to remember naming format rather than an IP address. The name of the domain is like the name of a person, and the IP address is like his phone number. On the Internet we have IP numbers for each host (computer, server, router, and so on), and we replace these IP numbers to easy remember names, which are organized into the domain name. As to xDSL environment, most of the users will use dynamic IP addresses. If users want to set up a web or a FTP server, then the Dynamic Domain Name Server is necessary. For more DDNS configuration, please consult your dealer.

Your Internet Service Provider (ISP) provides you at least one IP address which you use to connect to the Internet. The address you get may be static, meaning it never changes, or dynamic, meaning it's likely to change periodically. Just how often it changes, depends on your ISP. A dynamic IP address complicates remote access since you may not know what your current WAN IP address is when you want to access your network over the Internet. The solution to the dynamic IP address problem comes in the form of a dynamic DNS service.

The Internet uses DNS servers to lookup domain names and translates them into IP addresses. Domain names are just easy to remember aliases for IP addresses. A dynamic DNS service is unique because it provides a means of updating your IP address so that your listing will remain current when your IP address changes. There are several excellent DDNS services available on the Internet and best of all they're free to use. One such service you can use is www.DynDNS.org. You'll need to register with the service and set up the domain name of your choice to begin using it. Please refer to the home page of the service for detailed instructions or refer to Appendix D for more information.



DDNS:	To enable or disable the DDNS service here.
Server name:	Choose the built-in DDNS server.

DDNS Host:	The domain name is applied of this device.
User Name:	The user name is used to log into DDNS.
Password:	The password is used to log into DDNS.

3.5.4 PPPoE

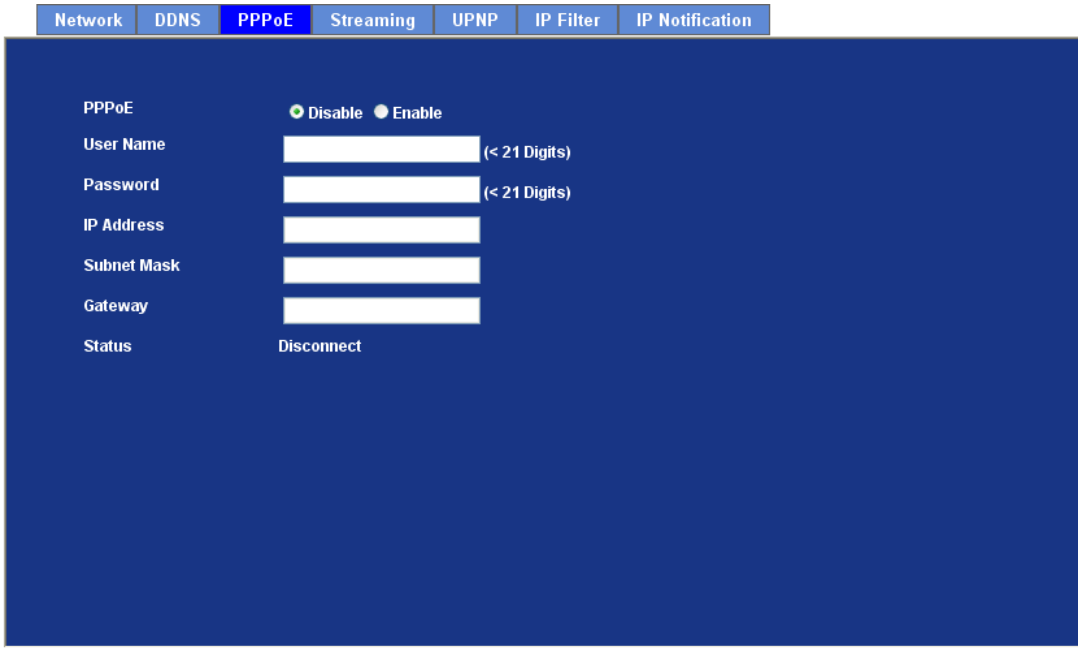
PPPoE: Stands for Point to Point Protocol over Ethernet

A standard builds on Ethernet and Point-to-Point network protocol. It allows IR IP Camera connect to Internet with xDSL or cable connection; it can dial up your ISP and get a dynamic IP address. For more PPPoE and Internet configuration, please consult your ISP.

It can directly connect to the xDSL, however, it should be setup on a LAN environment to program the PPPoE information first, and then connect to the xDSL modem. Power on again, then the device will dial on to the ISP connect to the WAN through the xDSL modem.

The procedures are

- Connect to a LAN by DHCP or Fixed IP
- Access the device, enter **Setting ➔ Network ➔ PPPoE** as below



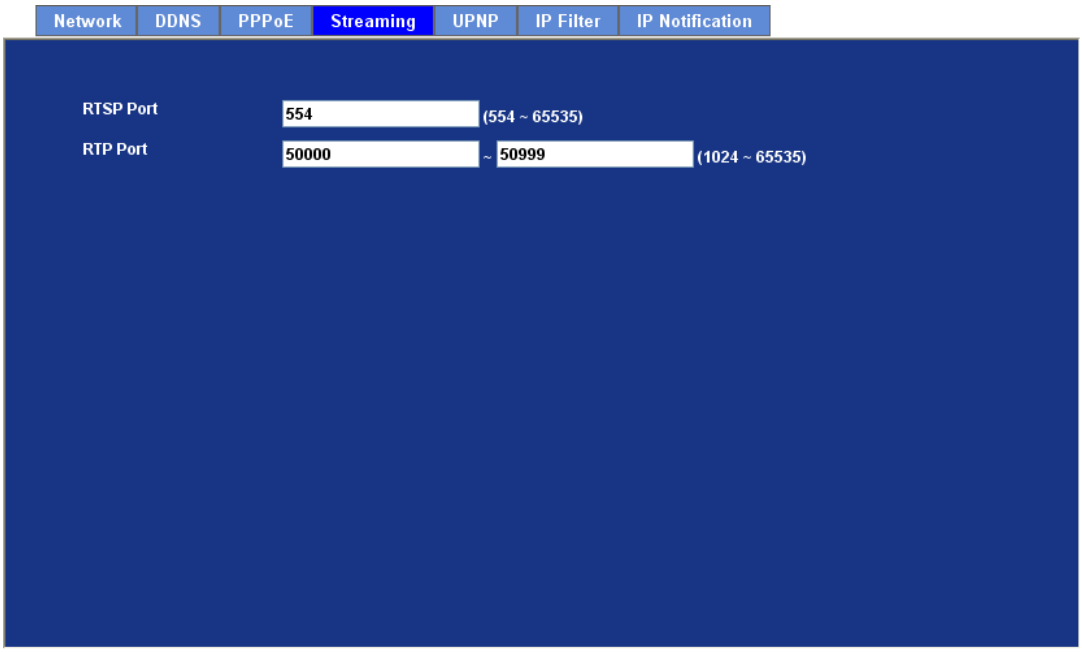
PPPoE:	To enable or disable the PPPoE service here.
User Name:	Type the user name for the PPPoE service which is provided by ISP.
Password:	Type the password for the PPPoE service which is provided by ISP.
IP Address, Subnet	Shows the IP information got from PPPoE server site.

Mask, and Gateway:

Status:	Shows the Status of PPPoE connection.

3.5.5 Streaming

RTSP is a streaming control protocol, and a starting point for negotiating transports such as RTP, multicast and Unicast, and for negotiating codecs. RTSP can be considered a "remote control" for controlling the media stream delivered by a media server. RTSP servers typically use RTP as the protocol for the actual transport of audio/video data.



RTSP Port:	Choose the RTSP port. The RTSP protocol allows a connecting client to start a video stream. Enter the RTSP port number to use. The default value is 554.
RTP Port:	Specify the range of transmission port number of video stream. The default range is 50000 to 50999. User can specify a number between 1024 and 65535.

To use the 3GPP function, in addition to previous section, you might need more information or configuration to make this function work.

NOTE: To use the 3GPP function, it strongly recommends installing the Networked Device with a public and fixed IP address without any firewall protection.

RTSP Port:	Port 554 is the default for RTSP service. However, sometimes, some service providers change this port number for some reasons. If so, user needs to change this port accordingly.

Dialing procedure:

1. Choose a verified player (PacketVideo or Realplayer currently)
2. Use the following URL to access: **rtsp://host/mpeg4/media.3gp**

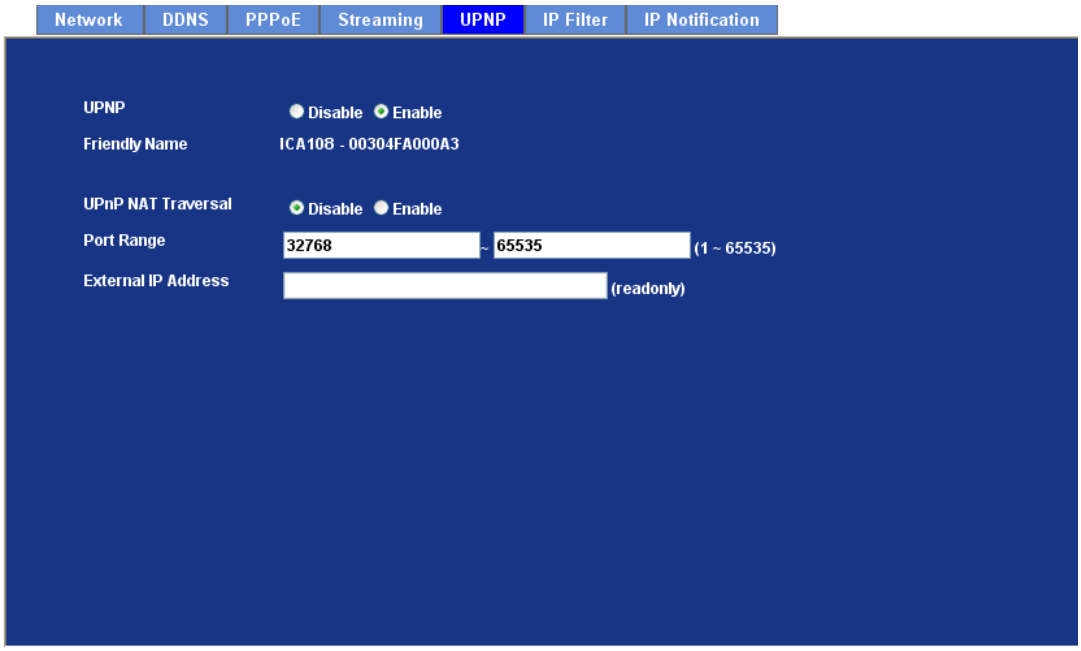
	Where host is the host name or IP address of the IR IP Camera.

Compatible 3G mobile phone: Please contact your dealer to get the approved list of compatible 3G phone.

3.5.6 UPnP

UPnP is short for Universal Plug and Play, which is a networking architecture that provides compatibility among networking equipment, software, and peripherals. This device is an UPnP enabled IR IP Camera. If your operating system is UPnP enabled, the device will automatically be detected and a new icon will be added to "My Network Places." If you do not want to use the UPnP functionality, it can be disabled

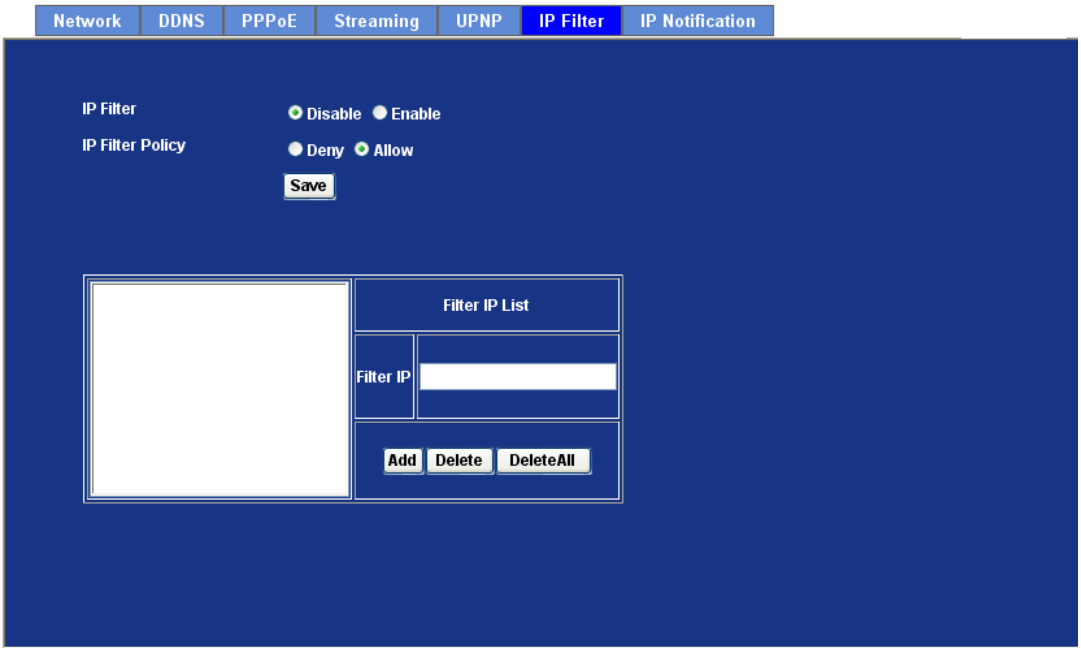
In addition, this device also provides UPnP IGD function for NAT traversal easily. Use NAT traversal when your device is located on an intranet (LAN) and you wish to make it available from the other (WAN) side of a NAT router. With NAT traversal properly configured, all HTTP traffic to an external HTTP port in the NAT router will be forwarded to the device.



UPnP:	To enable or disable the UPnP service here.
Friendly Name:	Shows the friendly name of this device here.
UPnP NAT Traversal:	When enabled, the device will attempt to configure port mapping in a NAT router on your network, using UPnP™. Note that UPnP™ must be enabled in the NAT router first.
Port Range:	The port range will open in NAT router.
External IP address:	Show the IP address and port for WAN access through Internet. If NAT traversal is configured successfully, user can use this IP address and port to access this device.

3.5.7 IP Filter

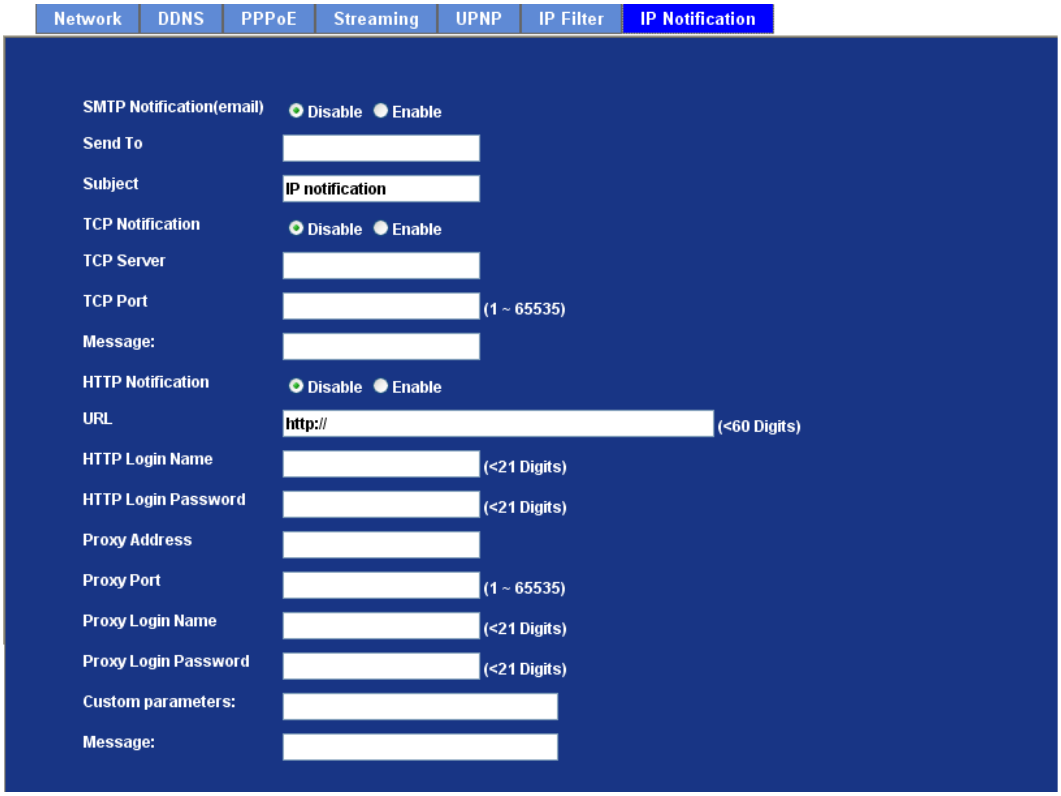
You can enter different user's IP address which are allowing enter or denying by the device.



IP Filter:	To enable or disable the IP filter function here.
IP Filter Policy:	Choose the filter policy where is denying or allowing.

3.5.8 IP Notification

In case the IP address is changed, system is able to send out an email to alert someone if the function is enabled.



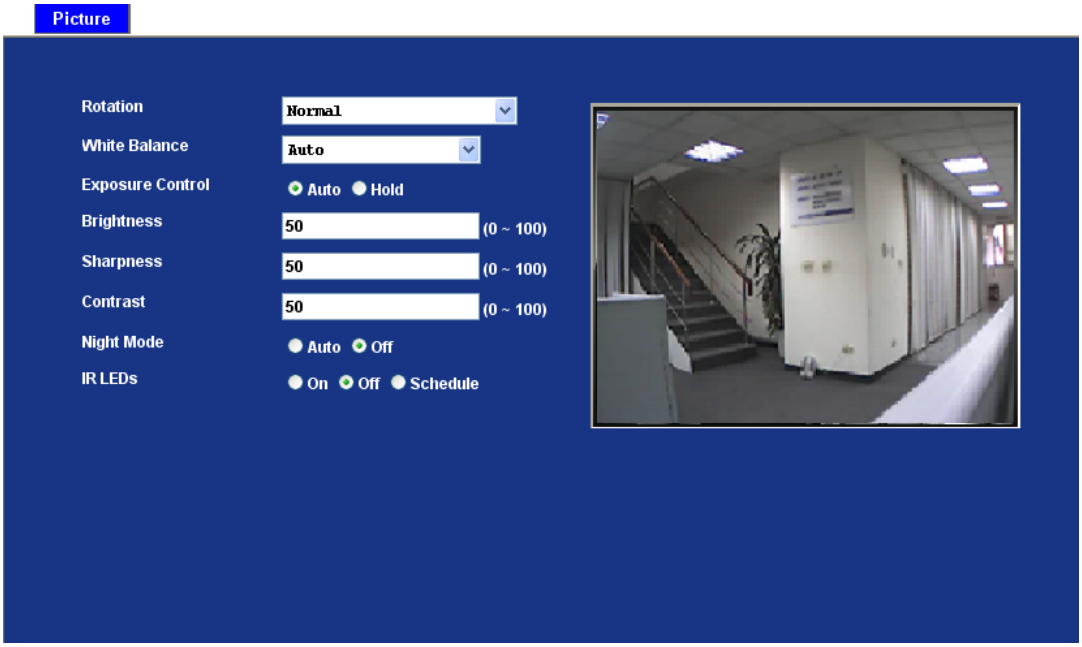
SMTP Notification (e-mail)	If enable this function, then the "**Send to**" and "**Subject**" field need to be filled.
Send To	Type the receiver's e-mail address. This address is used for reply mail.
Subject	Type the subject/title of the E-mail.
TCP Notification	If enable this function, then the "**TCP Server**", "**TCP Port**", and "**Message**" fields need to be filled.
TCP Server	Type the server name or the IP address of the TCP server.
TCP Port	Set port number of TCP server.
Message	The message will be sent to FTP server.
HTTP Notification	If enable this function, then the fields below need to be filled.
URL	Type the server name or the IP address of the HTTP server.
HTTP Login Name	Type the user name for the HTTP server.

HTTP Login Password	Type the password for the HTTP server.
Proxy Address	Type the server name or the IP address of the HTTP Proxy.
Proxy Port	Set port number of Proxy.
Proxy Login Name	Type the user name for the HTTP Proxy.
Proxy Login Password	Type the password for the HTTP Proxy.
Custom Parameter	User can set specific parameters to HTTP server.
Message	The message will be sent to HTTP server.

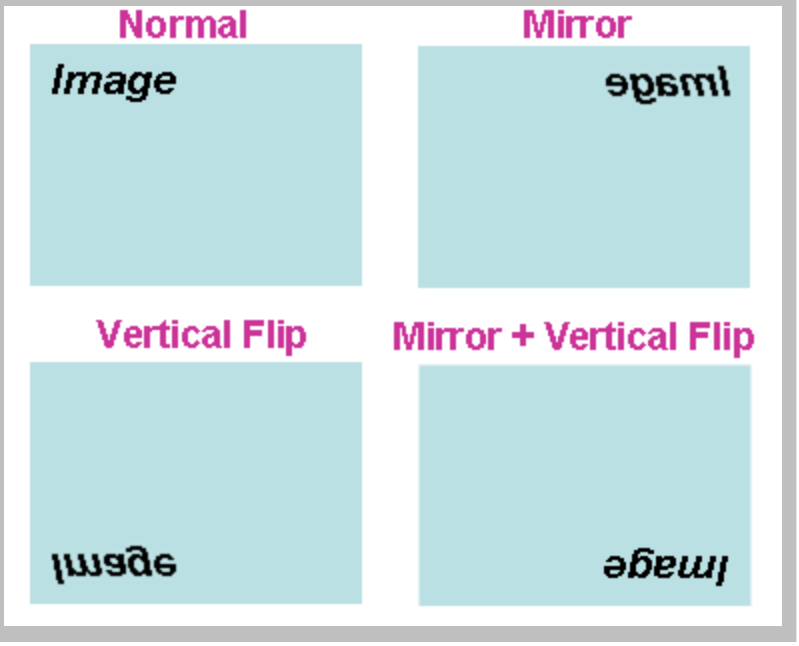
3.6 Camera

Use this menu to set the function of the camera of IR IP Camera

3.6.1 Picture



Rotation: Turn the “Mirror” and “Vertical Flip” On or OFF. The image will be overturned as below.



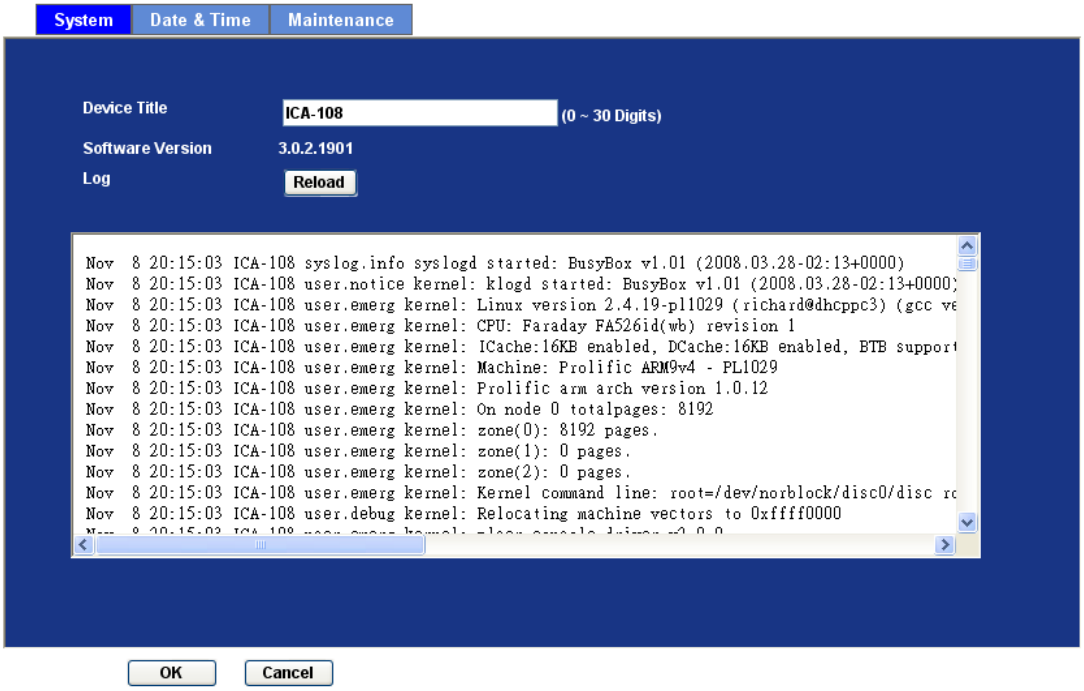
White Balance: Auto: will adjust the white balance automatically.

	Hold: will hold the white balance.
Exposure Control:	Auto: will adjust the internal gain automatically. Hold: will hold the internal gain.
Power Frequency:	User should choose either 50 or 60 Hz to meet the power line frequency in your country.
Brightness:	Large value will brighten IR IP Camera.
Sharpness:	Large value will sharpen IR IP Camera.
Contrast:	Large value will contrast IR IP Camera heavily.
Night Mode:	User can turn Auto or Off of the night mode. This function is very useful under low illumination environment.
IR LEDs:	User can turn On, Off or Schedule of the built-in IR LEDs. This function is very useful under low illumination environment even 0 Lux. Note that CMOS sensor will turn to black and white mode once IR LEDs turned on.

3.7 System

Use this menu to perform the principal settings of IR IP Camera.

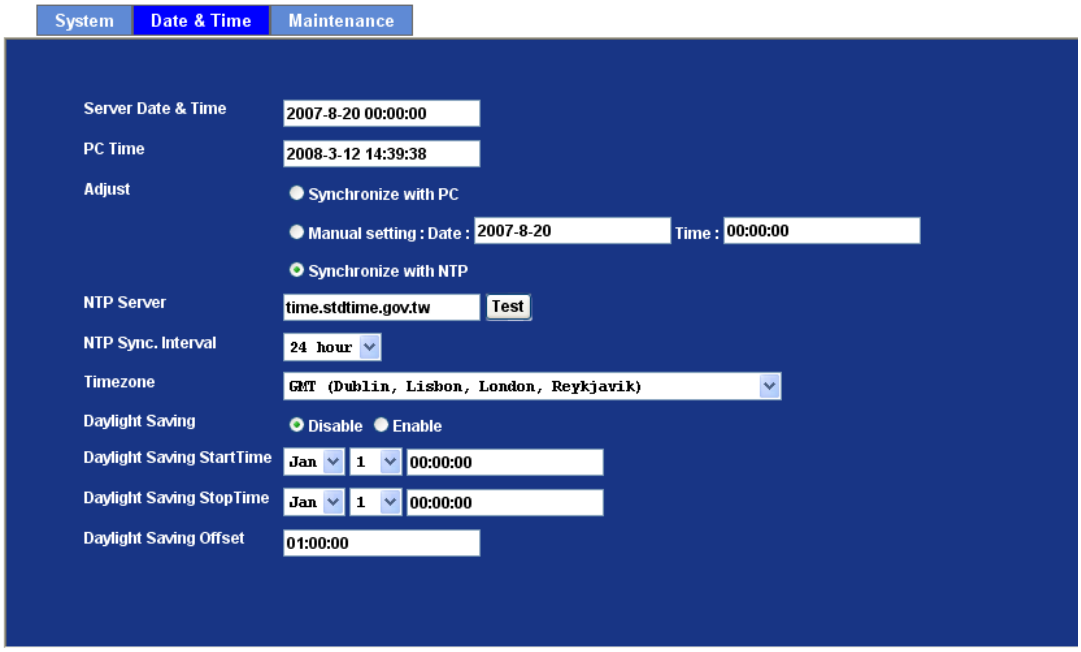
3.7.1 System


System
Date & Time
Maintenance
Device Title
ICA-108
(0 ~ 30 Digits)
Software Version
3.0.2.1901
Log
Reload
Nov 8 20:15:03 ICA-108 syslog.info syslogd started: BusyBox v1.01 (2008.03.28-02:13+0000)
Nov 8 20:15:03 ICA-108 user.notice kernel: klogd started: BusyBox v1.01 (2008.03.28-02:13+0000)
Nov 8 20:15:03 ICA-108 user.emerg kernel: Linux version 2.4.19-pl1029 (richard@dhcppc3) (gcc ve
Nov 8 20:15:03 ICA-108 user.emerg kernel: CPU: Faraday FA526id(wb) revision 1
Nov 8 20:15:03 ICA-108 user.emerg kernel: ICache:16KB enabled, DCache:16KB enabled, BTB support
Nov 8 20:15:03 ICA-108 user.emerg kernel: Machine: Prolific ARM9v4 - PL1029
Nov 8 20:15:03 ICA-108 user.emerg kernel: Prolific arm arch version 1.0.12
Nov 8 20:15:03 ICA-108 user.emerg kernel: On node 0 totalpages: 8192
Nov 8 20:15:03 ICA-108 user.emerg kernel: zone(0): 8192 pages.
Nov 8 20:15:03 ICA-108 user.emerg kernel: zone(1): 0 pages.
Nov 8 20:15:03 ICA-108 user.emerg kernel: zone(2): 0 pages.
Nov 8 20:15:03 ICA-108 user.emerg kernel: Kernel command line: root=/dev/norblock/disc0/disc
Nov 8 20:15:03 ICA-108 user.debug kernel: Relocating machine vectors to 0xffff0000
OK
Cancel

Device title:	You can enter the name of this unit here. It's very useful to identify the specific device from multiple units.
Software version:	This information shows the software version in the device.
Log:	User can check the system log information of the device, including the Main Info, Appended Info, Operator IP, and so on …

3.7.2 Date & Time

You can setup the time setting of IR IP Camera, make it synchronized with PC or remote NTP server. Also, you may select the correct time zone of your country.

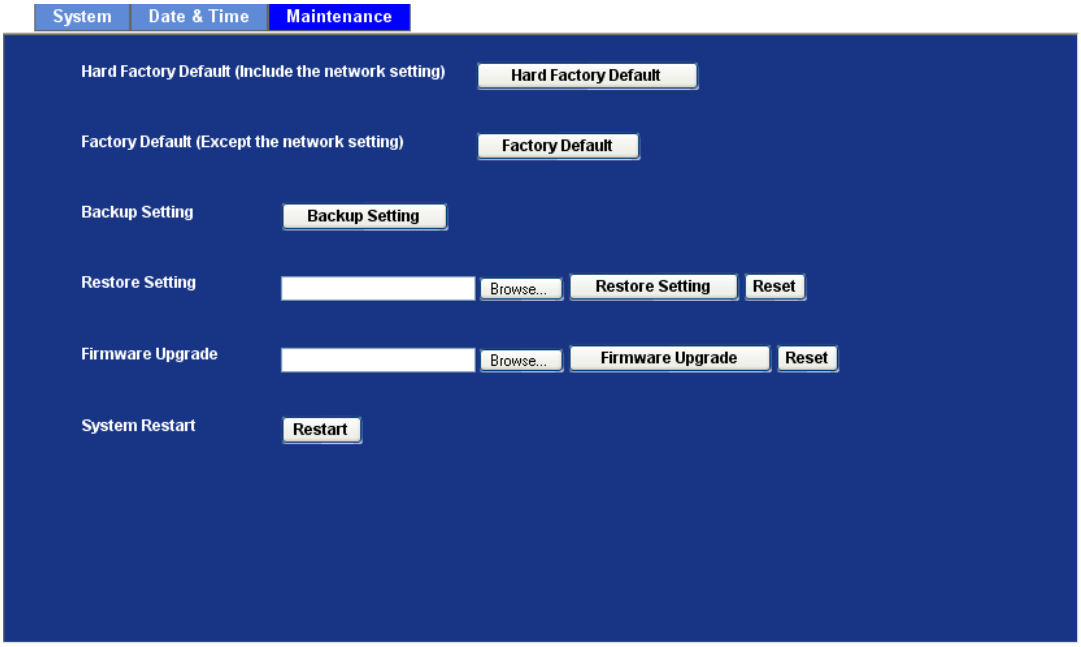


Server Date & Time:		Displays the date and time of the IR IP Camera
PC Time:		Displays the date and time of the connected PC
Adjust:	**Manual setting:**	Click this option to set time and date manually
	Synchronize with NTP:	Click this option if you want to synchronize the IR IP Camera's date and time with those of time server called NTP server (Network Time Protocol)
	Synchronize with PC:	Click this option to enable time synchronization with PC time
NTP server name:		Type the host name or IP address or domain name of the NTP server.
NTP sync. Interval:		Select an interval between 1 and 23 hours at which you want to adjust the IR IP Camera's time referring to NTP server
Time zone:		Set the time difference from Greenwich Mean Time in the area where the IR IP Camera is installed.
Daylight saving:		Check this item to enable daylight saving adjustment.
Daylight Saving		Sets up the date and time of daylight saving start time.

Start Time:

Daylight Saving Stop Time:	Sets up the date and time of daylight saving stop time.
Daylight Saving Offset:	Sets up the date of daylight saving offset.

3.7.3 Maintenance



Hard Factory Default (Include the network setting):	Recall the device hard factory default settings. Note that click this button will reset all device's parameters to the factory settings (including the IP address).
Factory Default (Except the network setting):	The unit is restarted and most current settings are reset to factory default values. This action will not reset the network setting.
Backup Setting:	To take a backup of all of the parameters, click this button. If necessary, it will then be possible to return to the previous settings, if settings are changed and there is unexpected behavior.
Restore Setting:	Click the "Browse" button to locate the saved backup file and then click the "Restore Setting" button. The settings will be restored to the previous configuration.

Firmware upgrade:	The device supports new firmware upgrade.
	1. Close all other application programs which are not necessary for firmware update. 2. Make sure that only you access this IR IP Camera at this moment 3. Disable Motion Detection function. 4. Select "**Firmware name**" 5. Select the Firmware binary file. (**Note** that it must make sure that the Firmware only applies to this device, once update, it will be burned into FLASH ROM of system.) 6. Once the firmware file was selected, select "Upgrade". 7. The upgrade progress information will be displayed on the screen. 8. A message will be shown while the firmware upgraded. Once the upgrading process completed, the device will reboot the system automatically. 9. Please wait for 80 seconds, and then you can use IP Wizard to search the device again.

Warning!!! The download firmware procedure cannot be interrupted. If the power and/or network connection are broken during the download procedure, it might possibly cause serious damage to the IR IP Camera.

Please be aware that you should not turn off the power during updating the firmware and wait for finish message.

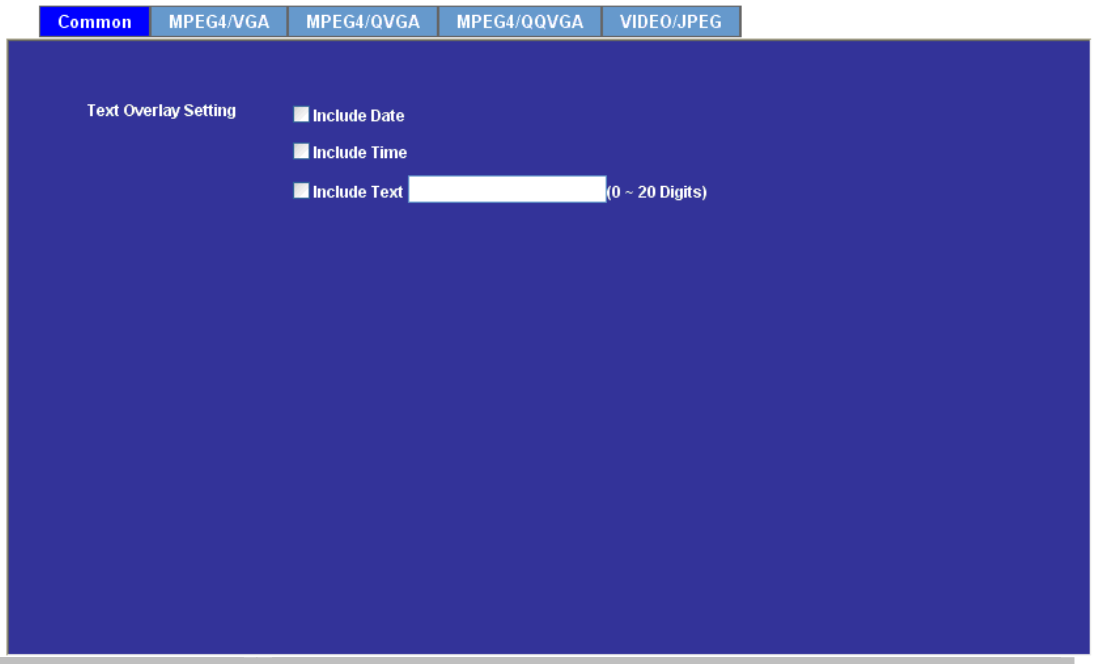
Furthermore, do not try to upgrade new firmware if it's not necessary.

System Restart:	The IR IP Camera is restarted without changing any of the settings.

3.8 Video

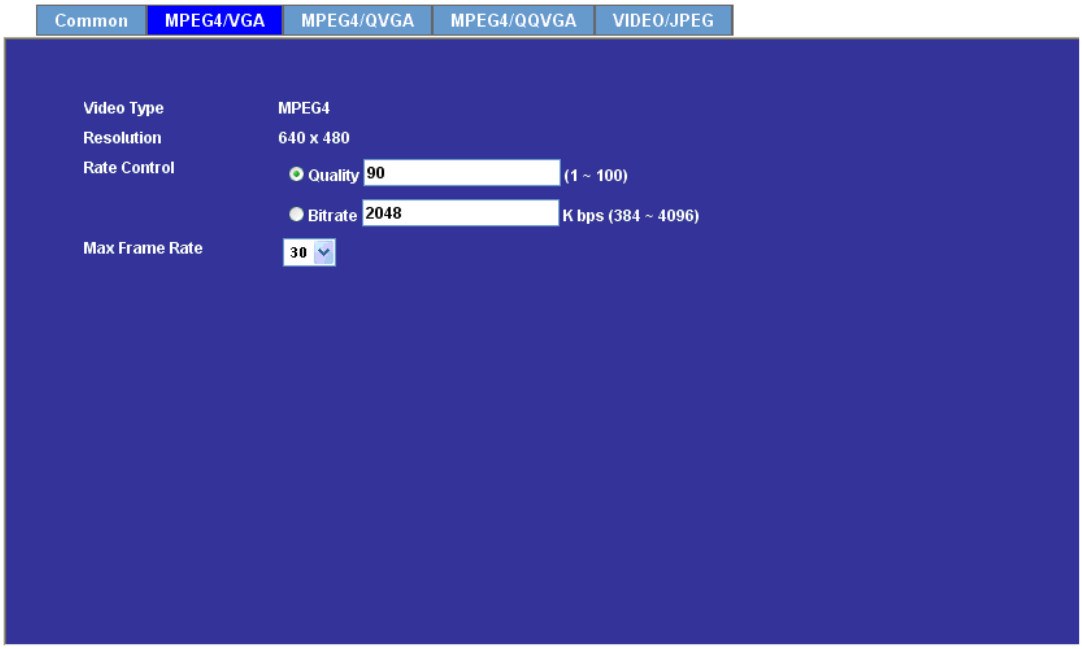
IP IR Camera provides more video profiles as below to support different request to each client simultaneously. Each user can choose his preferred video profile as his request independently.

3.8.1 Common



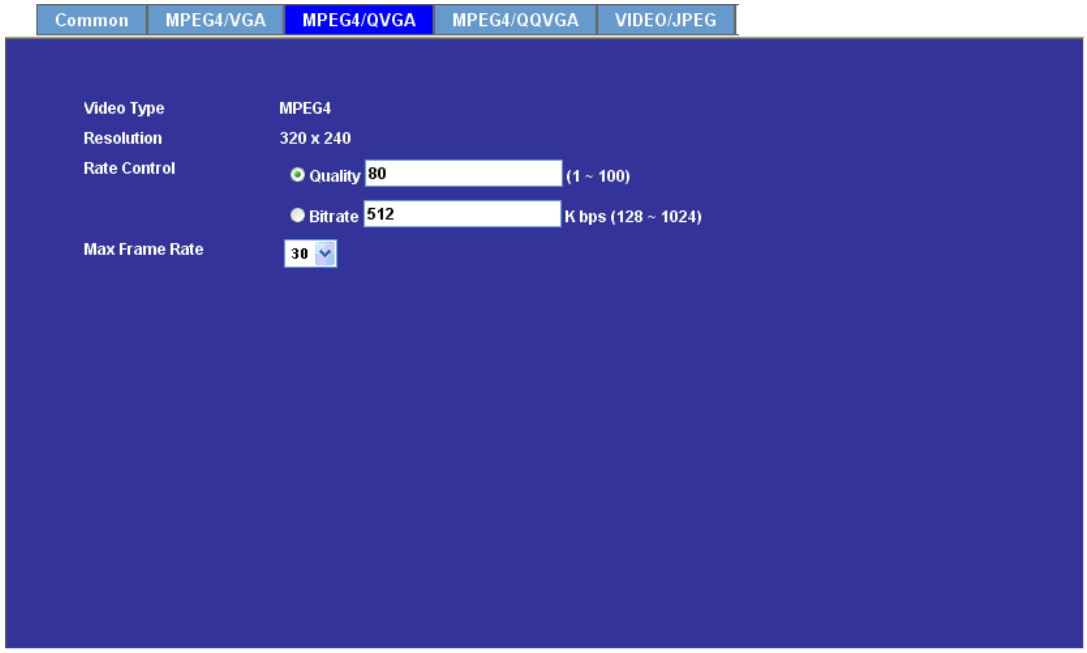
Text Overlay Setting:	There are some important information can be embedded into image, including date, time, and/or text.

3.8.2 MPEG4/VGA



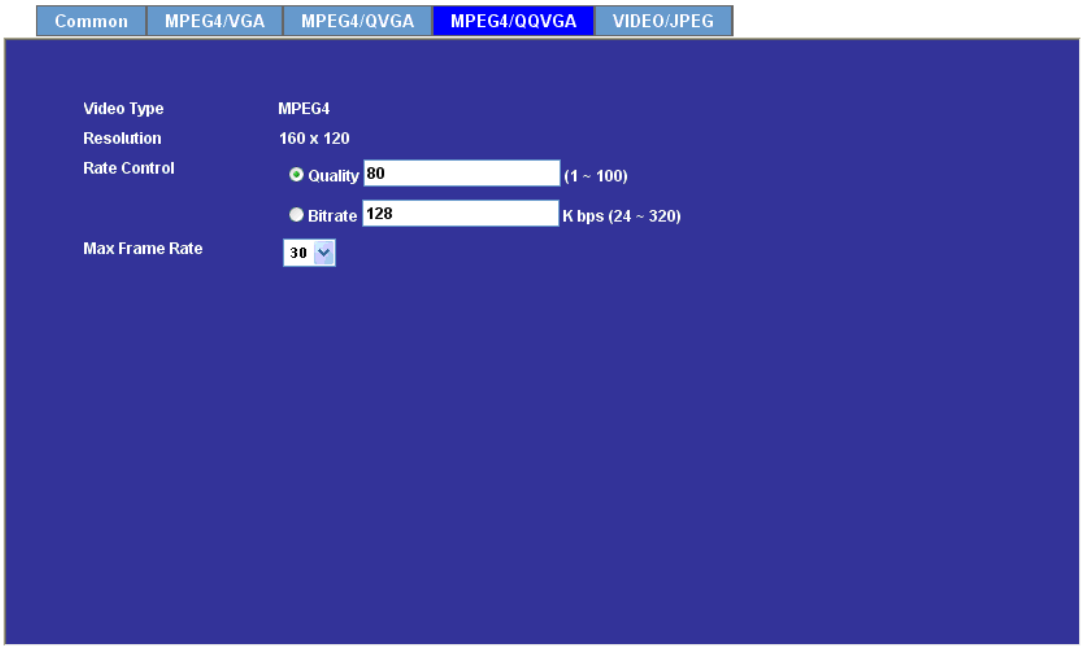
Video Type:	It's MPEG4 mode in this profile
Resolution:	It's VGA mode (640x480) in this profile
Bit rate control:	Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the video bit rate is between 384kbps and 4096kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quality level to set the video quality rather than bit rate. The quality level is between 1 and 100. The higher value is the better quality.
Max Frame Rate:	Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

3.8.3 MPEG4/QVGA



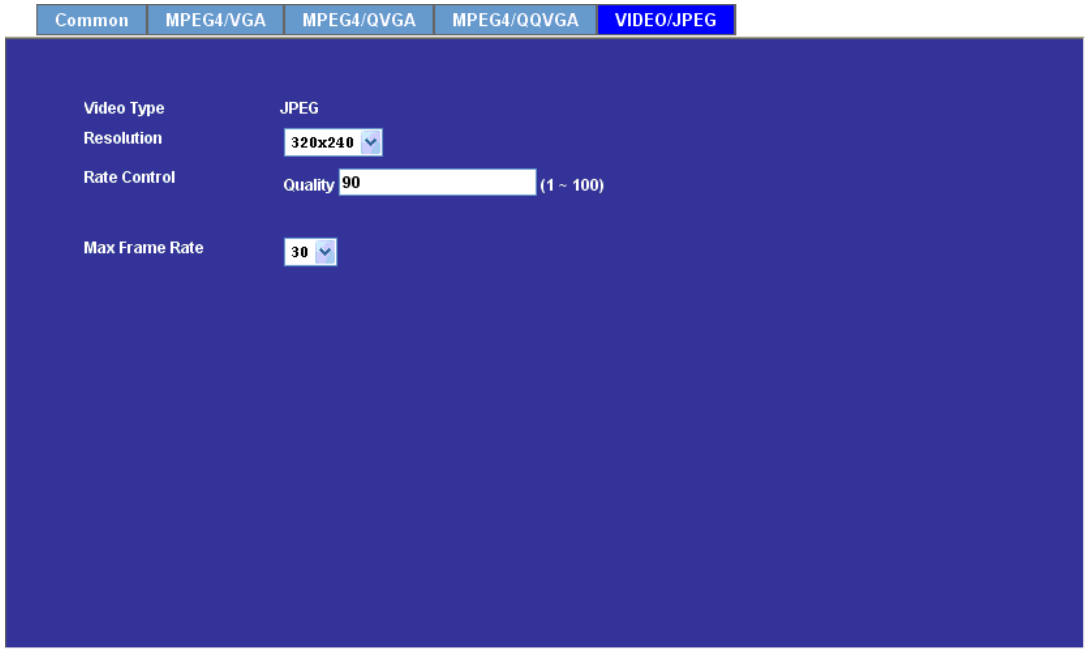
Video Type:	It's MPEG4 mode in this profile.
Resolution:	It's QVGA mode (320x240) in this profile.
Bit rate control:	Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the video bit rate is between 128kbps and 1024kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quality level to set the video quality rather than bit rate. The quality level is between 1 and 100. The higher value is the better quality.
Max Frame Rate:	Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth

3.8.4 MPEG4/QQVGA



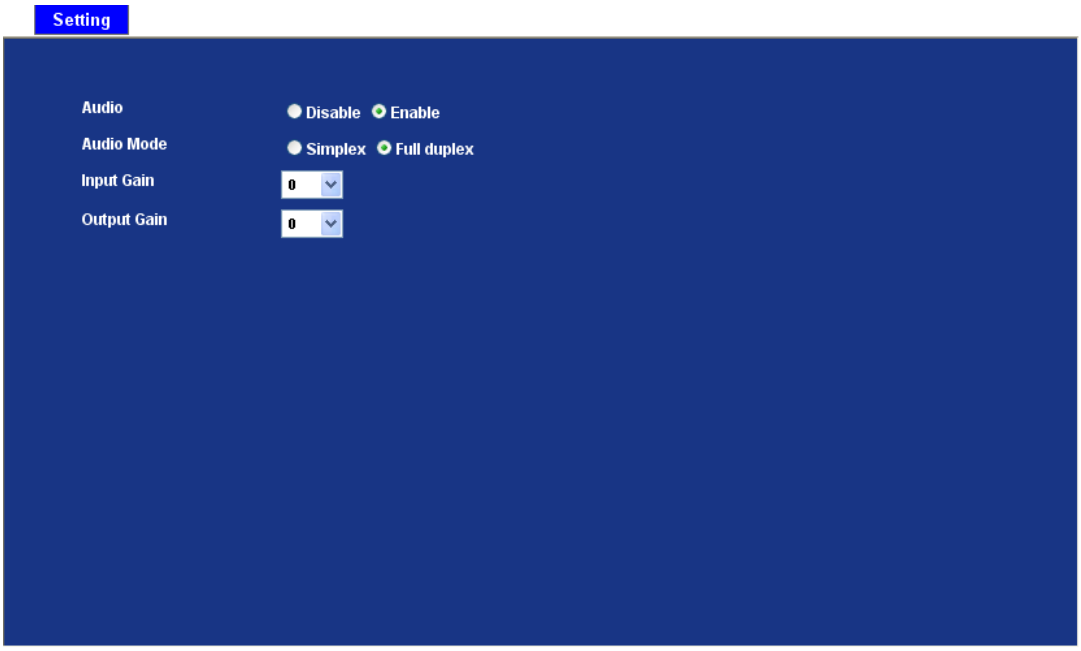
Video Type:	It's MPEG4 mode in this profile.
Resolution:	It's QQVGA mode (160x120) in this profile.
Bit rate control:	Defines the rate control method of this profile. There are two options: Constant Bit Rate (CBR) or Variable Bit Rate (VBR). For CBR, the video bit rate is between 24kbps and 320kbps. User can set the desired bit rate to match the limitation of bandwidth. For VBR, user should choose the quality level to set the video quality rather than bit rate. The quality level is between 1 and 100. The higher value is the better quality.
Max Frame Rate:	Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

3.8.5 VIDEO/JPEG



Video Type:	It's JPEG mode in this profile.
Resolution:	User can select VGA, QVGA, or QQVGA mode as the resolution of this JPEG profile.
Rate Control:	The quality level is between 1 and 100. The higher value is the better quality.
Max Frame rate:	Defines the targeted frame rate of this profile. For example, set the frame rate to 15 fps, then the image will be updated for 15 frames per second. User can set the desired max frame rate versus video quality under the limited bandwidth.

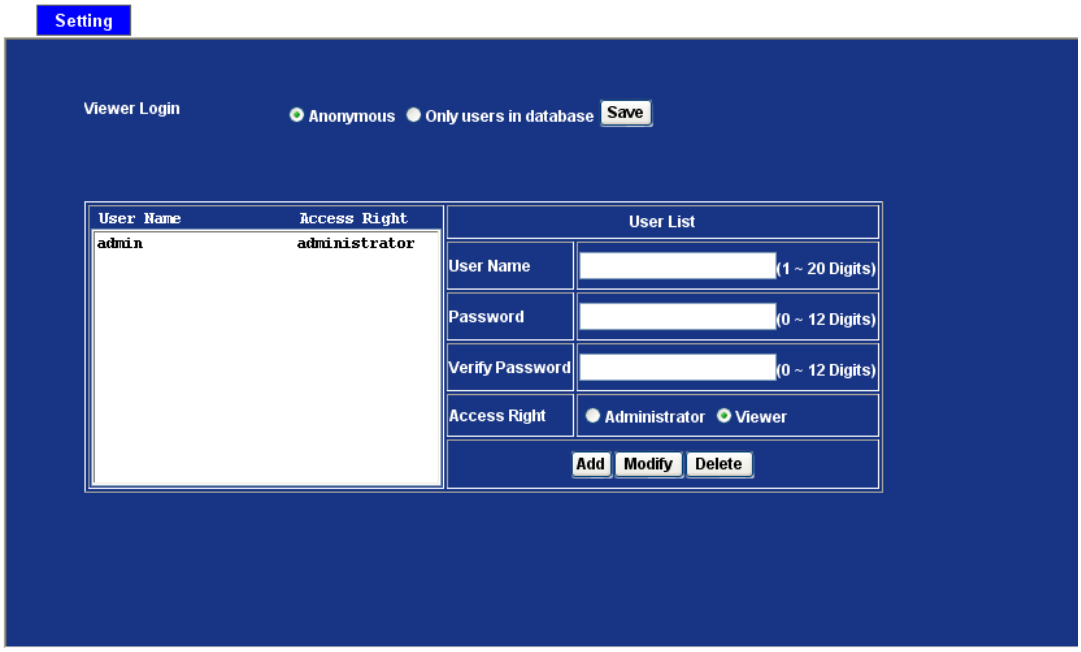
3.9 Audio



Audio:	To enable or disable audio function
Audio Mode:	To select Simplex or Full duplex (2-way audio) mode
Input Gain:	To adjust gain of input audio
Output Gain:	To adjust gain of output audio

3.10 User

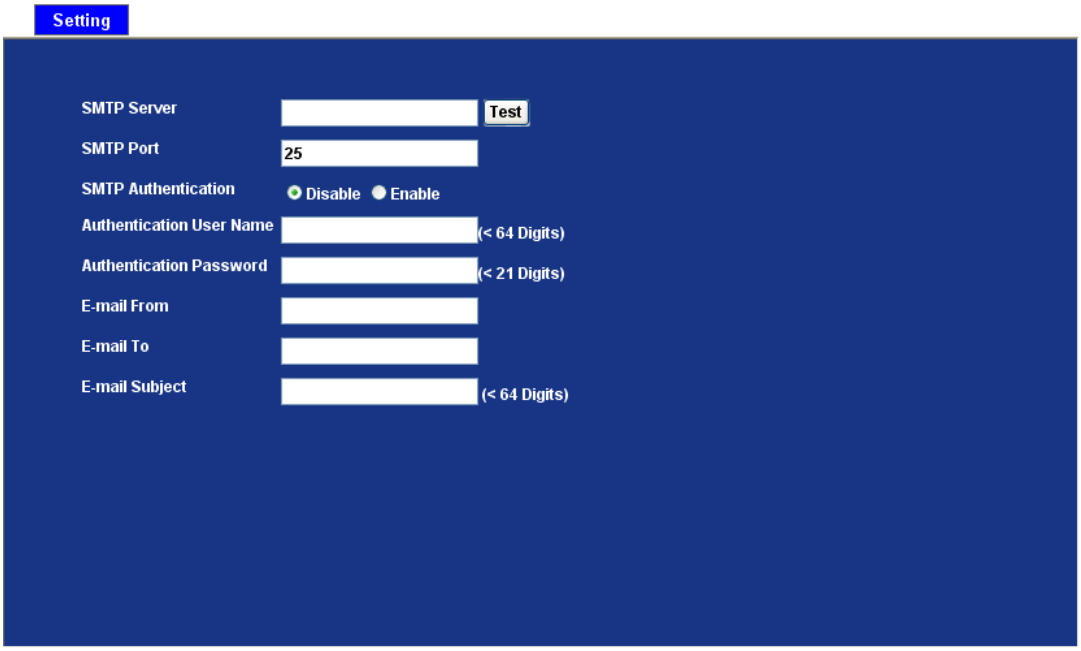
Use this menu to set the user names and password of the Administrator and up to 10 users, and access right of each user.



Viewer login:	**Anonymous:**	Choose this to enable anonymous user login.
	Only users in database:	Choose this to disable anonymous user login.
User name:	Enter the user's new account here which you want.	
Password:	Enter the user's new password here.	
Verify Password:	Please enter the user's new password here again to confirm.	
Access Right:	Administrator can access every function in this device. However, Viewers only can view the video and access limited function.	
Add, Update, and Remove:	Manage the user's account of viewer user.	

3.11 E-Mail

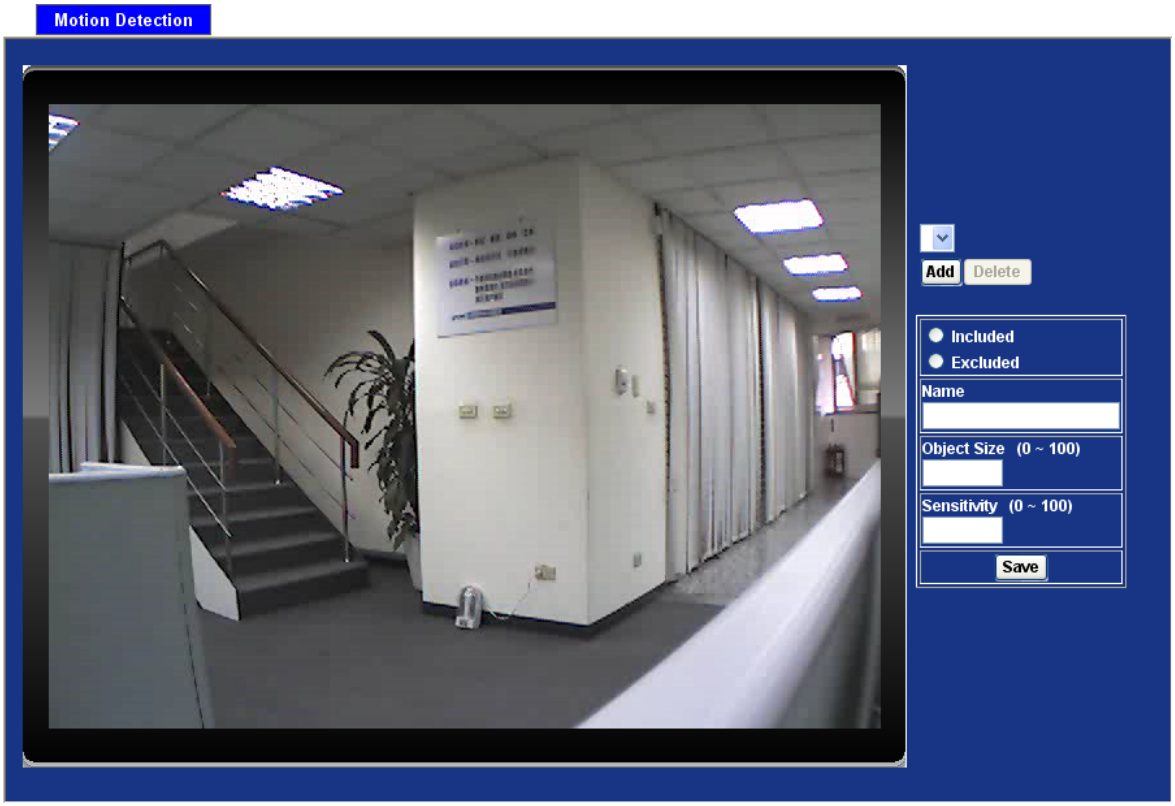
You may setup SMTP mail parameters for further operation of Event Schedule. That's, if users want to send the alarm message out, it will need to configure parameters here and also add at least one event schedule to enable event triggering.



SMTP Server:	Type the SMTP server name or the IP address of the SMTP server.
Test:	Send a test mail to mail server to check this account is available or not.
SMTP Port:	Set port number of SMTP service.
SMTP Authentication:	Select the authentication required when you send an e-mail.
Disable:	If no authentication is required when an e-mail is sent.
Enable:	If authentication is required when an e-mail is sent.
Authentication User Name:	Type the user name for the SMTP server if Authentication is Enable.
Authentication Password:	Type the password for the SMTP server if Authentication is Enable.
E-mail To:	Type the receiver's e-mail address.
E-mail From:	Type the sender's E-mail address. This address is used for reply e-mails.
E-mail Subject:	Type the subject/title of the e-mail.

3.12 Object Detection

Use this menu to specify motion detection window 1 to window 4 and set the conditions for detection while observing a captured image.



Add and Del:	To add or delete the motion windows. User can specify up to 4 Included and/or Excluded windows to monitor the video captured by this device. By dragging mouse on the image, you can change the position and size of the selected motion window accordingly.
Included or Excluded Window:	These windows can be specified as Included or Excluded type.
Included:	Windows target specific areas within the whole video image
Excluded:	Windows define areas within an Include window that should be ignored (areas outside Include windows are automatically ignored)
Name:	Name of the specified motion window.
Object Size:	Defines the object size of motion detection. The higher object size will only larger objects trigger motion detection. The lower object size will even small objects trigger motion detection too. Generally speaking, the smaller size will be easier to trigger event.

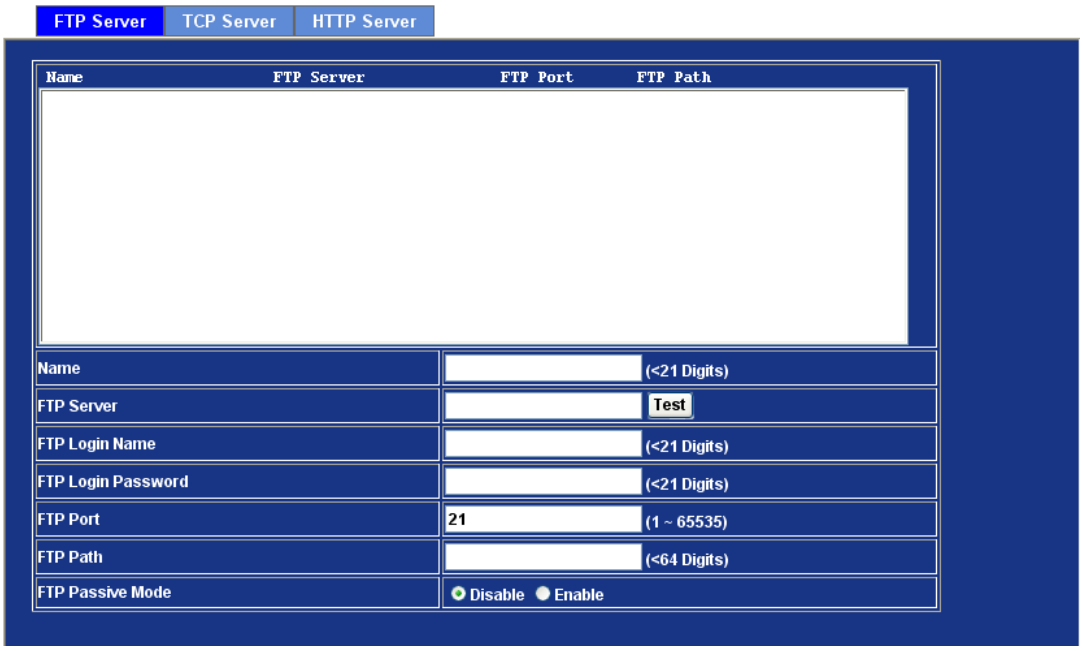
Sensitivity	Defines the sensitivity value of motion detection. The higher value will be more sensitivity.

3.13 Event Server

Setup FTP/TCP/HTTP server configuration

3.13.1 FTP Server

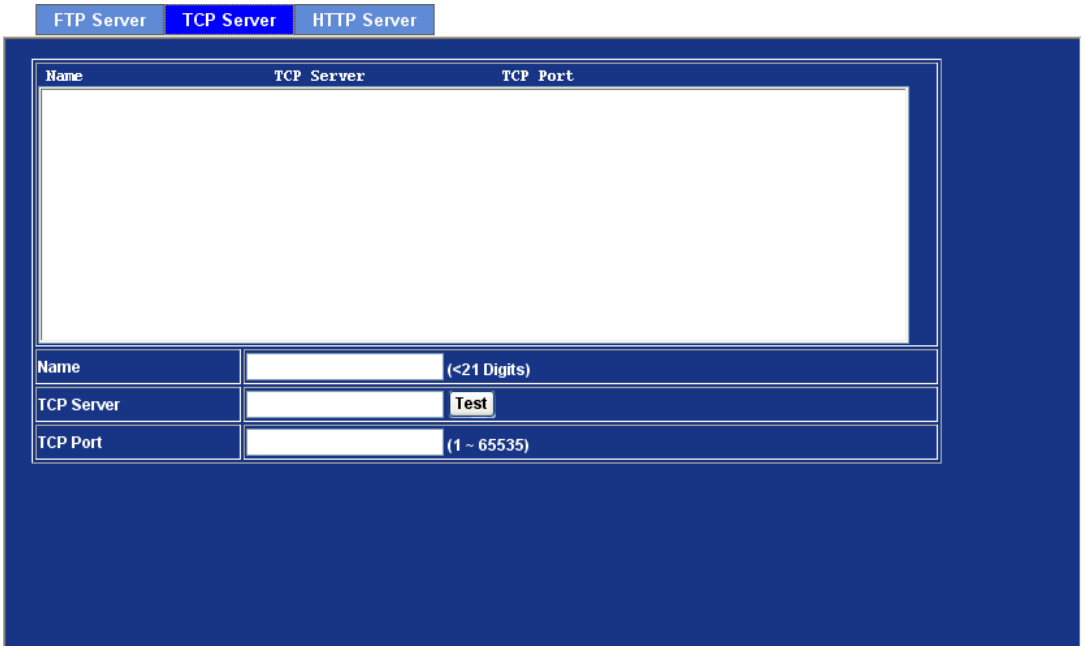
You may setup FTP parameters for further operation of Event Schedule. That's, if users want to send the alarm message to an FTP server, it will need to configure parameters here and also add at least one event schedule to enable event triggering as SMTP.



Name	User can specify multiple FTP paths as wish. Therefore, user needs to specify a name for each FTP setting.
FTP Server	Type the server name or the IP address of the FTP server.
Test	Check the FTP server whether this account is available or not.
FTP Login Name	Type the user name for the FTP server.
FTP Login Password	Type the password for the FTP server.
FTP Port	Set port number of FTP service.
FTP Path	Set working directory path of FTP server.
FTP Passive Mode	Select passive or active mode connecting to FTP server.

3.13.2 TCP Server

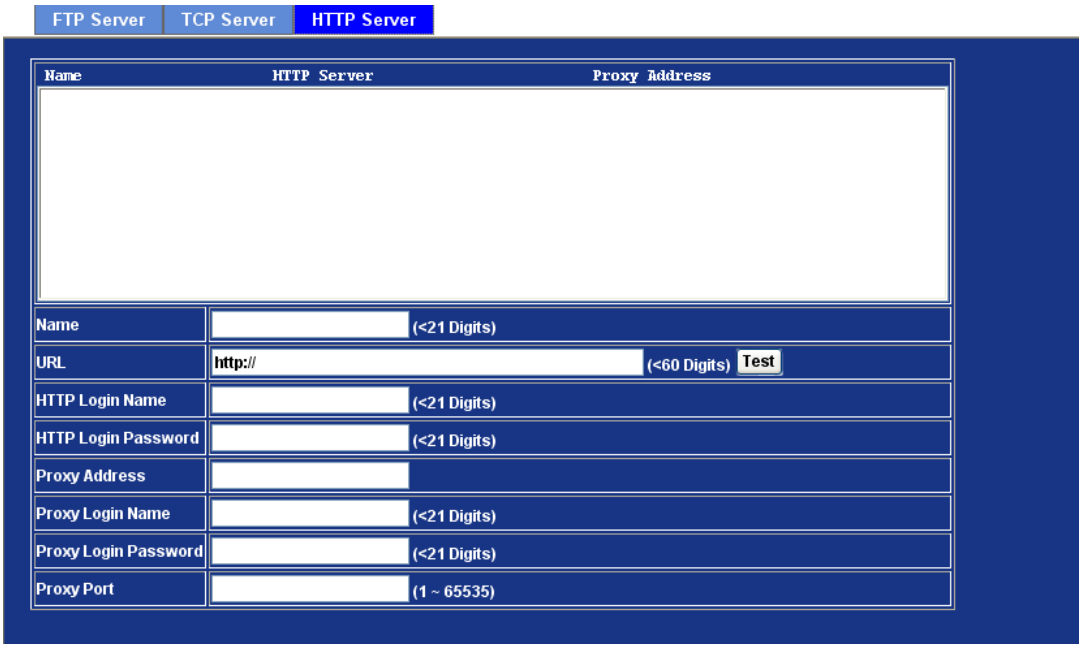
In addition to send video file to FTP server, the device also can send event message to specified TCP server.



Name	User can specify multiple TCP servers as wish. Therefore, user needs to specify a name for each TCP server setting.
TCP Server	Type the server name or the IP address of the TCP server.
TCP Port	Set port number of TCP server.

3.13.3 HTTP Server

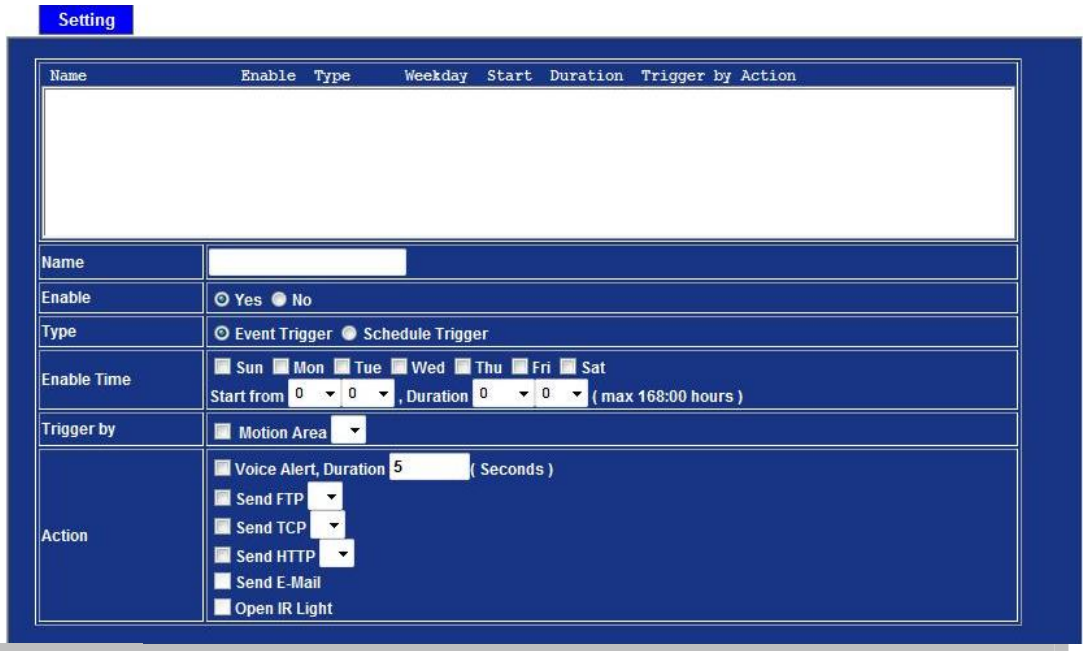
The device also can send event message to specified HTTP server.



Name	User can specify multiple HTTP servers as wish. Therefore, user needs to specify a name for each HTTP server setting.
URL	Type the server name or the IP address of the HTTP server.
Test	Check the HTTP server whether it is available or not.
HTTP Login Name	Type the user name for the HTTP server.
HTTP Login Password	Type the password for the HTTP server.
Proxy Address	Type the server name or the IP address of the HTTP Proxy.
Proxy Login Name	Type the user name for the HTTP Proxy.
Proxy Login Password	Type the password for the HTTP Proxy.
Proxy Port:	Set port number of Proxy.

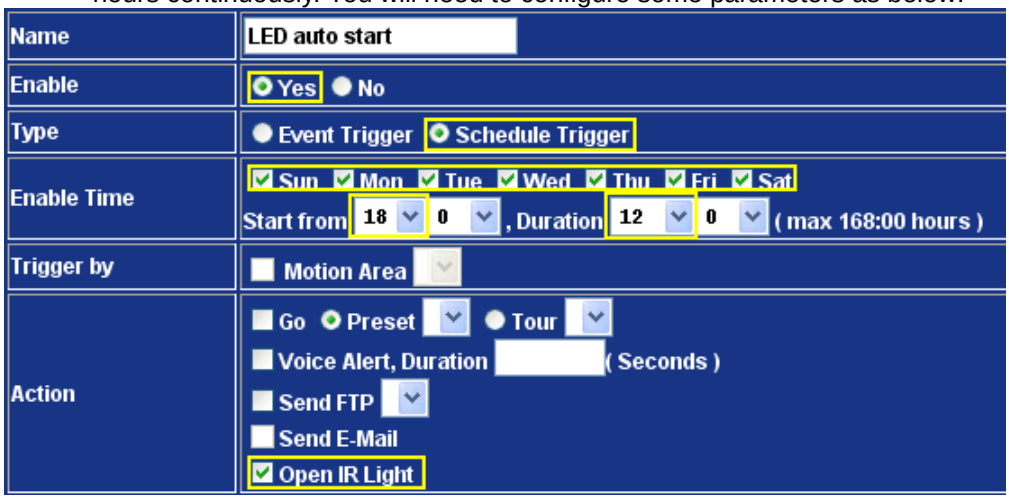
3.14 Event Schedule

This menu is used to specify the schedule of Events and activate the some actions provided by this device.

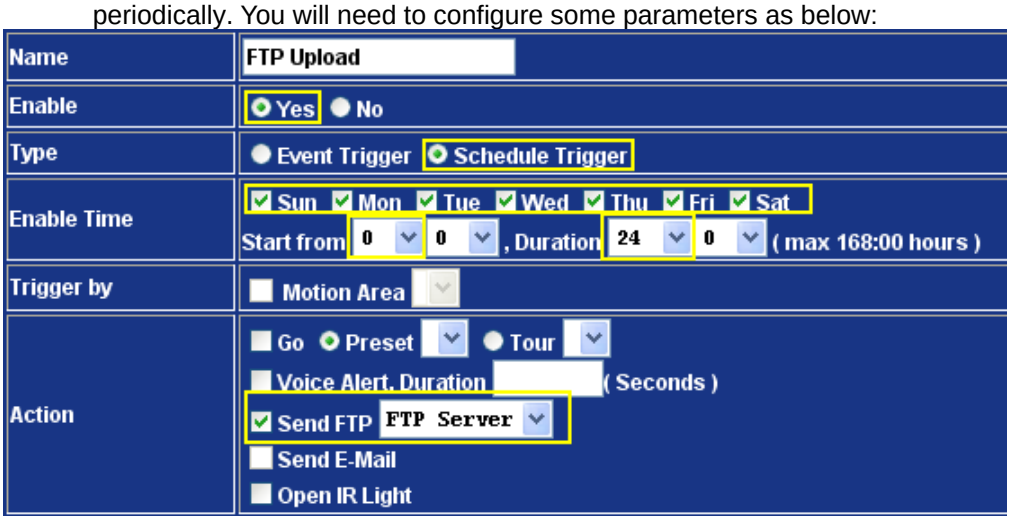


Name:	Name of the Event or Schedule.
Enable:	Enable or disable this Event or Schedule.
Type:	Schedule start with Event trigger or Schedule trigger.
Enable Time:	Define the feasible time slot.
Trigger by:	Select the triggered sources with event trigger.
Action:	Define the actions once event triggered.

Example1. If you want to IR LED auto start in 18:00 every day and IR LED shines for 12 hours continuously. You will need to configure some parameters as below:



Example2. If you want to upload image from PT Internet Camera to FTP server periodically. You will need to configure some parameters as below:



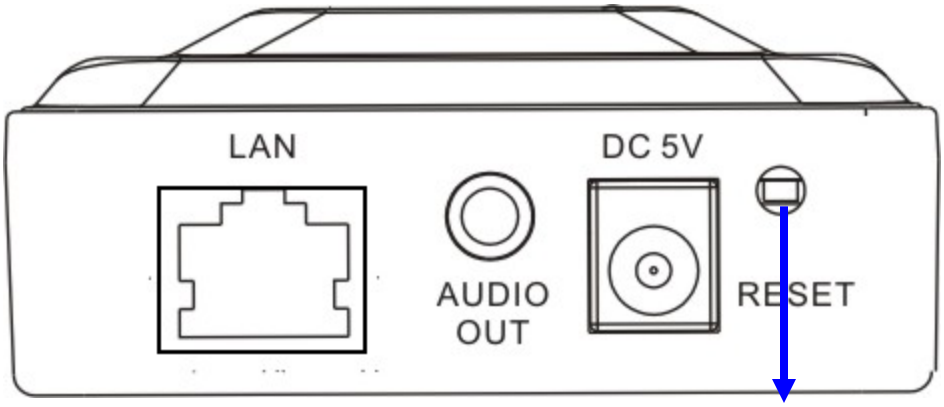
NOTE: PT Internet Camera will send a 15sec recording file to FTP server every min.

Appendix A: Reset Factory Default Settings

There is a button hidden in the pinhole near to the DC power connector. This button is used to restore the factory default settings. Sometimes restarting the ICA-108/108W will make the system back to a normal state. If the system still got problems after reset, user can restore the factory default settings and install it again.

Restore the ICA-108/108W:

1. Insert the paper clip or other tool and press and hold the button down continuously.
2. Wait at least 3 seconds and release the button. Then the ICA-108/108W has been restored to factory default settings and reboot again.



Reset to Factory Default

Note: Restoring the factory default setting will lose the all previous settings included IP address forever. User will need to run the IPWizard program to search the device and configure it to let the device work properly again.

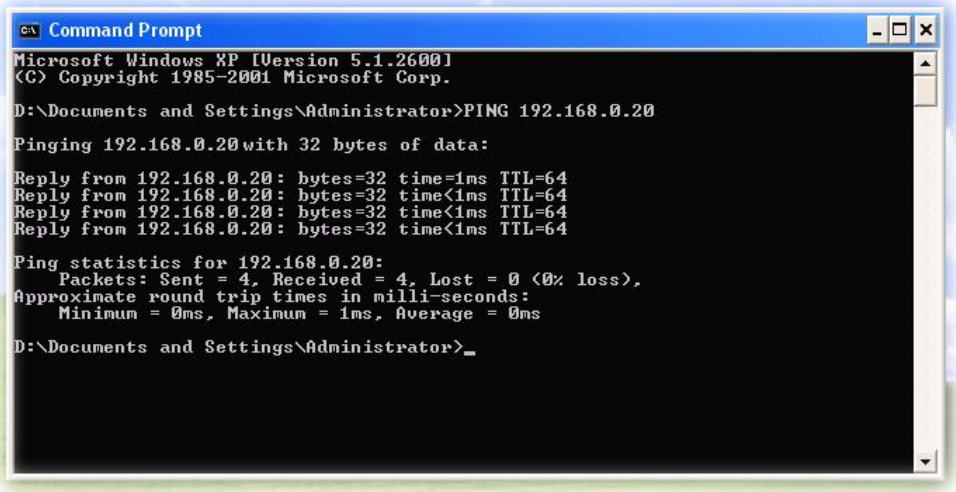
Appendix B: PING IP Address

The PING (stands for Packet Internet Groper) command is used to detect whether a specific IP address is accessible by sending a packet to the specific address and waiting for a reply. It's also a very useful tool to confirm IR IP Camera installed or if the IP address conflicts with any other devices over the network.

If you want to make sure the IP address of IR IP Camera, utilize the PING command as follows:

- Start a DOS window.
- Type ping x.x.x.x, where x.x.x.x is the IP address of the IR IP Camera.

The replies, as illustrated below, will provide an explanation to the problem.


Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
D:\Documents and Settings\Administrator>PING 192.168.0.20
Pinging 192.168.0.20 with 32 bytes of data:
Reply from 192.168.0.20: bytes=32 time=1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64
Reply from 192.168.0.20: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.0.20:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
D:\Documents and Settings\Administrator>

If you want to detect any other devices conflicts with the IP address of IR IP Camera, also can utilize the PING command but you must disconnect the IR IP Camera from the network first.

Appendix C: Bandwidth and Video Size Estimation

The frame rate of video transmitted from the IR IP Camera depends on connection bandwidth between client and server, video resolution, codec type, and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements for your IR IP Camera.

The required bandwidth depends on content of video source. The slow motion video will produce smaller bit rate generally and fast motion will produce higher bit rate vice versa. Actual results generated by the IR IP Camera may be varying.

Image Resolution	Average range of Data Sizes for JPEG mode	Average bit rate for MPEG4 mode
160 x 120 (QQVGA)	3 ~ 6k byte per frame	64kbps~384kbps @ 30fps
320 x 240 (QVGA)	8 ~ 20k byte per frame	128kbps~768kbps @ 30fps
640 x 480 (VGA)	20 ~ 50K byte per frame	256kbps~4096kbps @ 30fps

Note: Audio streaming also takes bandwidth around 5 kbps to 64kbps. Most xDSL/Cable modem upload speeds may not even reach up to 128 kbps. Thus, you may not be able to receive any video while streaming audio on a 128 kbps or lower connection. Even though the upload speed is more than 128kbps, for optimal video performance, disabling audio streaming will get better video performance.

MJPEG

Resolution	Quality setting	fps setting	Current stream	Current fps
320*240 CIF	Best	5 fps	around 2300Kbps	5 fps
320*240 CIF	Best	15 fps	around 6700Kbps	14.7fps
320*240 CIF	Best	25 fps	around 14300Kbps	28 fps
320*240 CIF	Normal	5 fps	around 400Kbps	4.2 fps
320*240 CIF	Normal	15 fps	around 1200Kbps	13 fps - 14 fps
320*240 CIF	Normal	25 fps	around 1700Kbps	30fps
320*240 CIF	Lowest	5 fps	around 350Kbps	4.2 fps
320*240 CIF	Lowest	15 fps	around 1100Kbps	13 - 14fps
320*240 CIF	Lowest	25 fps	around 2000Kbps	25 fps

MPEG4

Resolution	Stream setting	fps setting	Current stream	Current fps
640*480 VGA	384Kbps	5 fps	373Kbps - 388Kbps	5 fps
640*480 VGA	1024Kbps	5 fps	1024Kbps - 1036Kbps	5 fps
640*480 VGA	2048Kbps	5 fps	around 1800Kbps	5 fps
640*480 VGA	384Kbps	20 fps	around 550Kbps	22 fps
640*480 VGA	1024Kbps	20 fps	around 1400Kbps	20 fps
640*480 VGA	2048Kbps	20 fps	around 2600Kbps	16 - 17fps
320*240 CIF	200Kbps	5 fps	183Kbps - 200Kbps	5 fps
320*240 CIF	1024Kbps	5 fps	760Kbps - 800Kbps	5 fps
320*240 CIF	2048Kbps	5 fps	around 850Kbps	5 fps
320*240 CIF	200Kbps	25 fps	around 240Kbps	28 fps
320*240 CIF	1024Kbps	25 fps	around 1100Kbps	30 fps
320*240 CIF	2048Kbps	25 fps	around 1600Kbps	30 fps
160*120 QCIF	128Kbps	5 fps	117Kbps - 121Kbps	5 fps
160*120 QCIF	1024Kbps	5 fps	around 176Kbps	5 fps
160*120 QCIF	2048Kbps	5 fps	around 220Kbps	5 fps
160*120 QCIF	128Kbps	25 fps	around 155Kbps	30 fps
160*120 QCIF	1024Kbps	25 fps	around 520Kbps	30 fps
160*120 QCIF	2048Kbps	25 fps	around 1000Kbps	30 fps

Appendix D: DDNS Application

1. Preface

If you have a Cable modem or xDSL, this is a great way to host your own Networked Device or other TCP/IP Service. Get your own domain like www.yourname.com, www.yourname.com.tw etc. (Note: This domain must be registered with Internic via registration authorities such as Network Solutions, DirectNIC, Register.com etc). Your domain name's dynamic IP address is automatically tracked by a DDNS server.

Host your own Networked Device and much more no matter what your computer's IP address may be and even if you have dialup, DSL or cable modem internet connection where your computer's IP address changes all the time!! DDNS service supports all top level domain names including but not limited to .com, .net, .org, .to, .uk etc.

2. Ethernet Network Environment

Normally, DDNS service is only necessary for the users that could only obtain dynamic IP addresses. As to the users that could obtain the static valid IP address, they do not usually have to apply the DDNS service. Before we decide if DDNS is necessary for the users, we have to check what kind of Ethernet network environment we have to install our Networked Device on.

(1) Environment of Fixed Valid IP Network

If users could obtain valid IP addresses, they could save the effort to apply DDNS service. Because the IP address in this environment is fixed, users could input the IP address or domain name of demo site directly in the IE browser.

(2) Environment of Dynamic IP Network

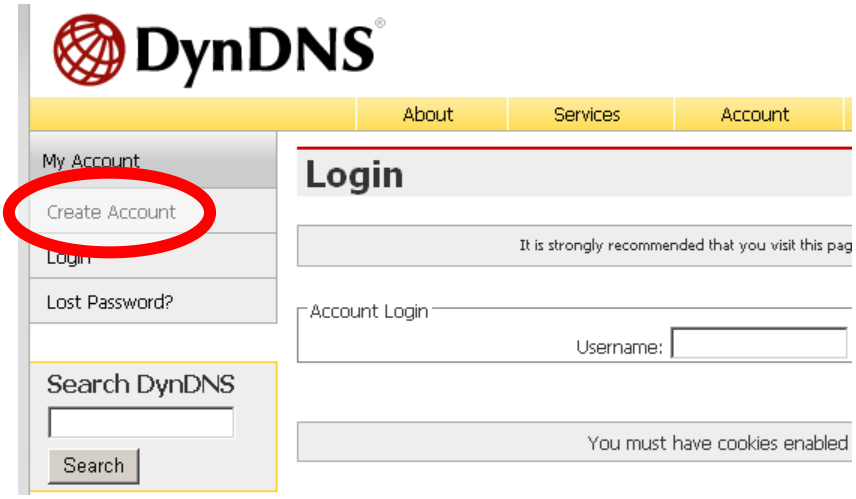
If users is under an environment of dynamic IP network (Dial-up xDSL), they have to apply a domain name in advance. Then apply DDNS service. Finally setup the necessary information of DDNS and PPPoE of the Networked Device in order to let the outside administrator be able to access through internet.

3. Application Steps – DDNS & Domain Name

(1). Visit the following web site: http://www.dyndns.org/

(2). Click “Account”

(3). After the columns show up at the left side, click “Create Account”.



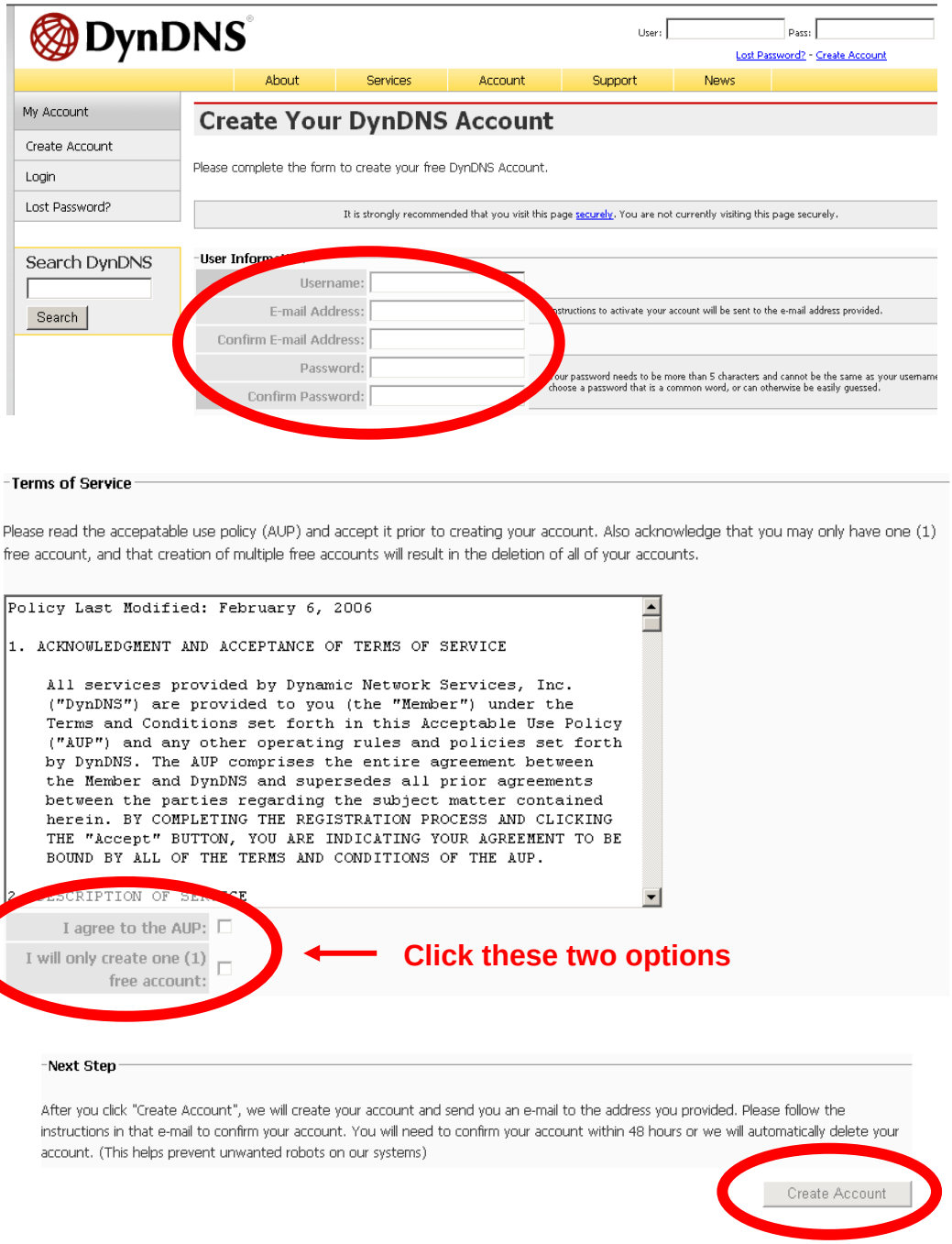
(4). Fill the application agreement and necessary information.

a. Username

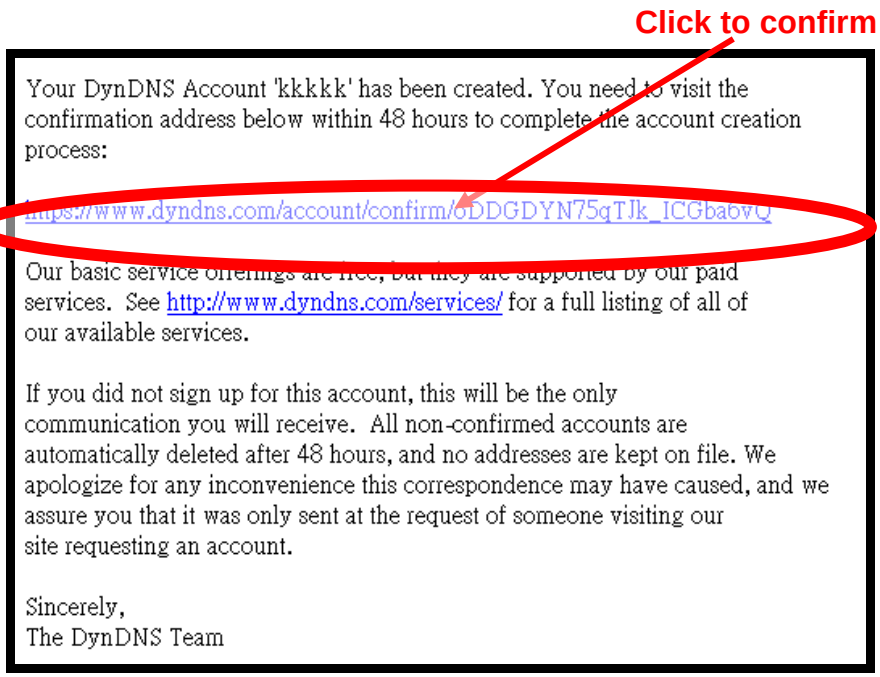
b. E-mail address and confirmation

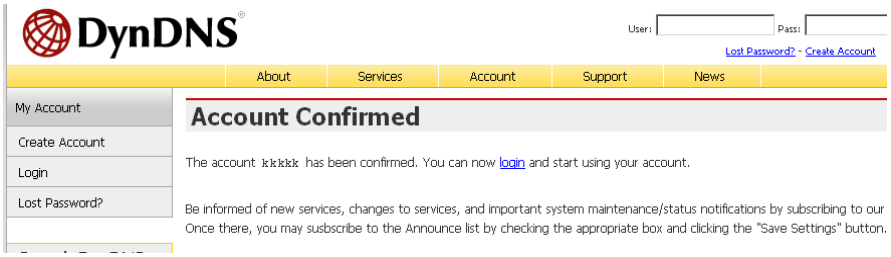
c. Password and confirmation

d. Submit all the input information and finish creating an account


DynDNS
User:
Pass:
Lost Password? - Create Account
About
Services
Account
Support
News
My Account
Create Account
Login
Lost Password?
Search DynDNS
Search
Create Your DynDNS Account
Please complete the form to create your free DynDNS Account.
It is strongly recommended that you visit this page securely. You are not currently visiting this page securely.
Username:
E-mail Address:
Confirm E-mail Address:
Password:
Confirm Password:
Terms of Service
Please read the accepatable use policy (AUP) and accept it prior to creating your account. Also acknowledge that you may only have one (1) free account, and that creation of multiple free accounts will result in the deletion of all of your accounts.
Policy Last Modified: February 6, 2006
1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE
All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Member") under the Terms and Conditions set forth in this Acceptable Use Policy ("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises the entire agreement between the Member and DynDNS and supersedes all prior agreements between the parties regarding the subject matter contained herein. BY COMPLETING THE REGISTRATION PROCESS AND CLICKING THE "Accept" BUTTON, YOU ARE INDICATING YOUR AGREEMENT TO BE BOUND BY ALL OF THE TERMS AND CONDITIONS OF THE AUP.
I agree to the AUP:
I will only create one (1) free account:
Click these two options
Next Step
After you click "Create Account", we will create your account and send you an e-mail to the address you provided. Please follow the instructions in that e-mail to confirm your account. You will need to confirm your account within 48 hours or we will automatically delete your account. (This helps prevent unwanted robots on our systems)
Create Account

(5). Check your e-mail mailbox. There will be an e-mail with a title “Your DynDNS Account Information“. Click the hyperlink address to confirm the DDNS service that you just applied. Then DDNS you applied activated.

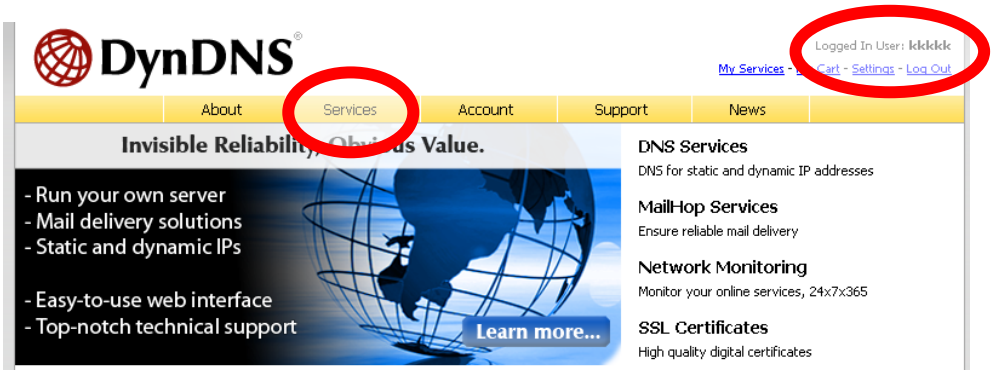

Click to confirm
Your DynDNS Account 'kkkkk' has been created. You need to visit the confirmation address below within 48 hours to complete the account creation process:
https://www.dyndns.com/account/confirm/6DDGDYN75qTJk_ICGbabvQ
Our basic service offerings are free, but they are supported by our paid services. See http://www.dyndns.com/services/ for a full listing of all of our available services.
If you did not sign up for this account, this will be the only communication you will receive. All non-confirmed accounts are automatically deleted after 48 hours, and no addresses are kept on file. We apologize for any inconvenience this correspondence may have caused, and we assure you that it was only sent at the request of someone visiting our site requesting an account.
Sincerely,
The DynDNS Team


DynDNS
User:
Pass:
Lost Password? - Create Account
About
Services
Account
Support
News
My Account
Create Account
Login
Lost Password?
Account Confirmed
The account kkkkk has been confirmed. You can now login and start using your account.
Be informed of new services, changes to services, and important system maintenance/status notifications by subscribing to our
Once there, you may susbscribe to the Announce list by checking the appropriate box and clicking the "Save Settings" button.

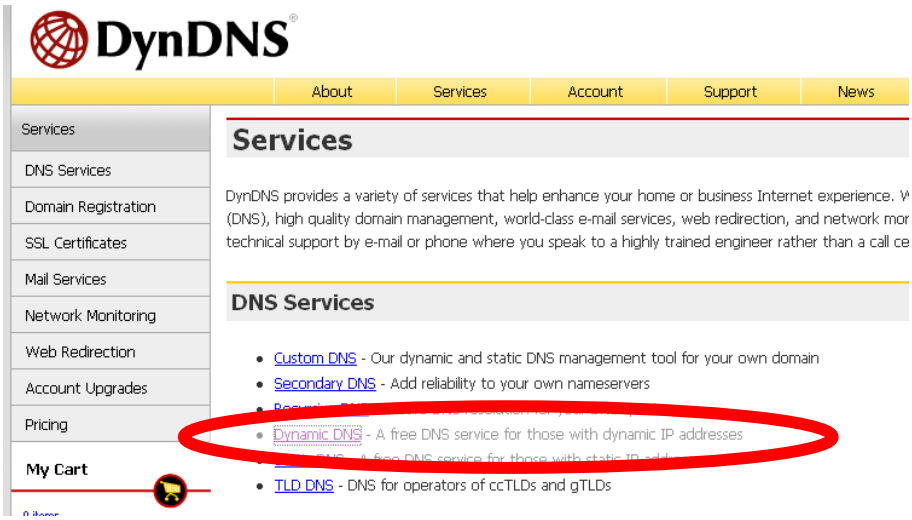
(6). Enter the web page http://www.dyndns.org/ again. Input your username and password that you just applied to login administration interface of DDNS server.

(7). If the correct username and password are input, you can see the following picture at the top-right of the login page.

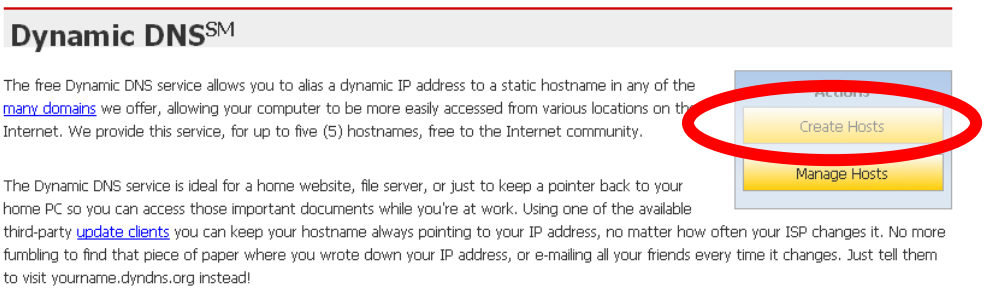
(8). Click the “Services”.



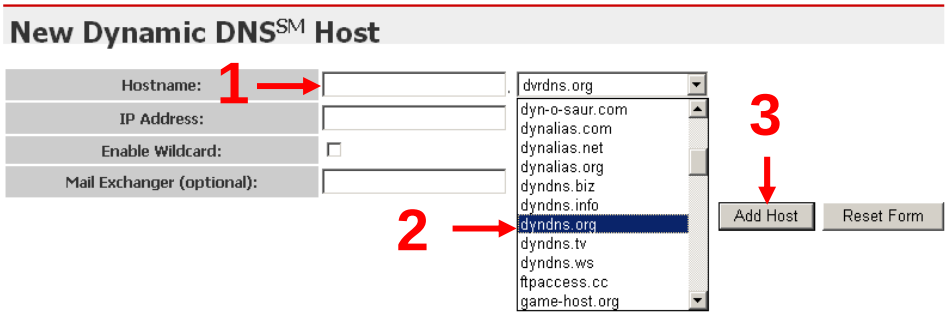
(9). Click the “ Dynamic DNS ”.


DynDNS
About
Services
Account
Support
News
Services
DNS Services
Domain Registration
SSL Certificates
Mail Services
Network Monitoring
Web Redirection
Account Upgrades
Pricing
My Cart
Services
DynDNS provides a variety of services that help enhance your home or business Internet experience. W
(DNS), high quality domain management, world-class e-mail services, web redirection, and network mor
technical support by e-mail or phone where you speak to a highly trained engineer rather than a call ce
DNS Services
Custom DNS - Our dynamic and static DNS management tool for your own domain
Secondary DNS - Add reliability to your own nameservers
Dynamic DNS - A free DNS service for those with dynamic IP addresses
TLD DNS - DNS for operators of ccTLDs and gTLDs

(10). Click the “Create Hosts”.


Dynamic DNSSM
The free Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the many domains we offer, allowing your computer to be more easily accessed from various locations on the Internet. We provide this service, for up to five (5) hostnames, free to the Internet community.
Create Hosts
Manage Hosts
The Dynamic DNS service is ideal for a home website, file server, or just to keep a pointer back to your home PC so you can access those important documents while you're at work. Using one of the available third-party update clients you can keep your hostname always pointing to your IP address, no matter how often your ISP changes it. No more fumbling to find that piece of paper where you wrote down your IP address, or e-mailing all your friends every time it changes. Just tell them to visit yourname.dyndns.org instead!

(11). We could create a domain name without any charge at this step. First, we input the host name. (No.1) Then we pick a domain that is easy to remember. Finally (No.2), click the “Add Host” to submit the domain name information. (No.3)



4. Setup the DDNS and PPPoE of Network Device

At last, users have to enter the web page of Networked Device and setup the necessary information of DDNS and PPPoE after the application of DDNS service. Please check the user manual to access the DDNS and PPPoE pages. After saving the modification, restart the device. The external users could browse the Networked Device by the input of their domain name.